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**Neighborhood Perception Data and Needs Analysis:**  
Tools for Small Business Site Selection and Retail Mix in the  
Discovery District in Downtown  
Columbus, Ohio, USA

Senior Honors Thesis - City & Regional Planning

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## **ABSTRACT**

This thesis proposes two potential tools for understanding neighborhood retail mix in the Discovery District in Downtown Columbus, Ohio, USA. While downtown has been growing and gaining residents since 2010, the retention rate of businesses has remained relatively the same regardless of the increase in residents. The first tool is perception data. Both community members within a neighborhood, and citizens not affiliated with a neighborhood, have perceptions of both the community and what is in it. Perceptions can differ regardless of statistical data, built infrastructure, or resources provided. In terms of economic development, what does perception mean for business site selection in neighborhoods? Perceptions of a neighborhood can cause people to believe one neighborhood to be an economic destination before others.

The second tool asks “how are we understanding what community needs are not being met in a neighborhood if a specific business type is desired”? This thesis uses Maslow’s Hierarchy of Needs to use a psychological definition of “need”. Then, business are assigned a level on the hierarchy to define what human need(s) the business provides. Looking at community retail mix from a “needs” perspective could provide insight into community business infill suggestions and community perception. Both perception data and the Maslow Needs analysis are proposed in this thesis to be possible improvements business infill and points of communication when the business sector and community members feel disconnected.

## I. INTRODUCTION

This study seeks to understand the retail mix in the Discovery District in Downtown Columbus, Ohio and how those affiliated with the district perceive retail mix in the district. The Discovery District was the chosen neighborhood of analysis for two reasons. First, even though the neighborhood encompasses the Columbus Museum of Art, BalletMet, the Columbus College of Art and Design, and many other cultural institutions- the perception of the “arts districts” in Columbus are the Short North and Franklinton. Experience Columbus writes, “Few cities around have such a mix of diverse neighborhoods, all within a short walk of downtown.... you’ll find the emerging arts epicenter of Franklinton...[and] the Short North Arts District delights with boutique shopping, outstanding nightlife and distinctive dining” (Neighborhoods in Columbus, n.d.). The Discovery District was selected to understand why the neighborhood is not perceived as the Columbus neighborhood destination for arts and culture.

Second, the Discovery District was selected because of the effort to revitalize downtown by attracting residents and businesses alike. The district is home to nearly 18,000 employees and 32,500 students- but only 2,500 residents (State of Downtown, 2016). The drastic contrast between the corporate business, institutional, and education activity compared to the lack of residents inspired the questions for this thesis. What is preventing people from living in the Discovery District? What *is* it like to live in the Discovery District? Are people - those who work, study, or live in the district - aware of the services and businesses within the Discovery District? From these questions, the retail mix was assessed as one factor that may deter residents from moving downtown. Perhaps the retail mix is not perceived as acceptable to residents. What does a neighborhood retail mix look like that satisfies a community’s needs and how do businesses choose a neighborhood?



Websites like Niche.com assist homebuyers in choosing a neighborhood by “grading” neighborhoods on quality of life measurements. The measurements can include schools,



nightlife, crime, etc. (Explore Schools and Neighborhoods, 2018). Economic development strategies use similar tactics for business recruitment- see the Columbus2020 “Quality of Life” indicators on page 17). The methods of how business owners, business recruitment entities, and cities select business site locations are discussed in the literature review. However, selecting small business locations to create

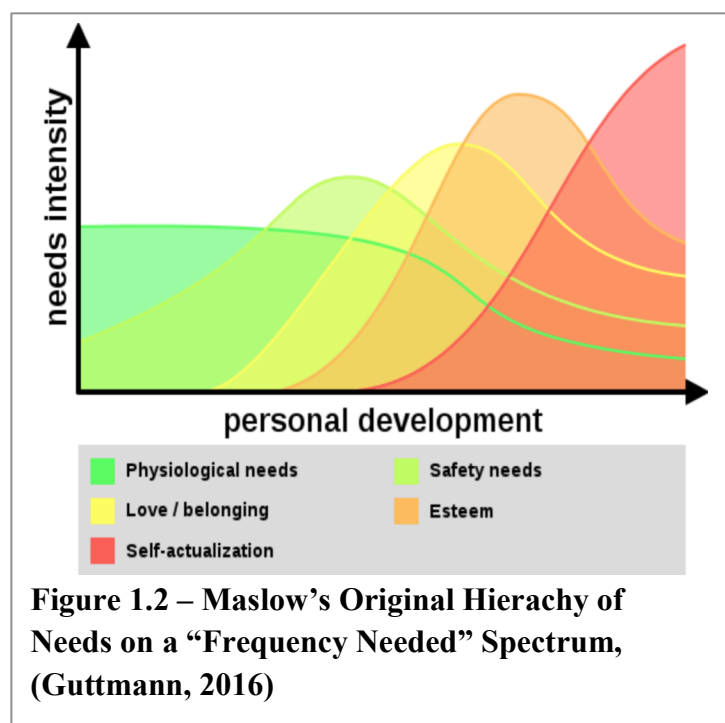
a healthy neighborhood retail mix can be more complex than the indicators currently used. The business retention rates in downtown Columbus, Ohio (Figure 1.1, State of Downtown 2016) leave one to question if current business site selection practices have limitations.

Business owners can be tasked with opening a business that might succeed based on the data they are able to obtain. Popular advice from publishers like TimeMoney.com and Entrepreneur.com most often base small business site selection on historical spending patterns of the neighborhood’s demographics and the reputation of the area (Mandelbaum, 2016).

Business recruitment entities, like the Columbus Downtown Development Corporation (CDDC) or Discovery District Special Improvement District (DD-SID) and city entities like Columbus 2020 try to identify the business needs that are not being met in the district and encourage development. However, again, the current practices may be limiting. Both business

owners and the CDDC/ DD-SID may need more tools to improve communication for the types of businesses that are needed in the Discovery District and improve retention.

Two tools are analyzed to supplement the current methods commonly used in neighborhood small business site selection. The aim was to verify the applicability of the tools to develop a retail mix theory that could increase business retention, increase resident satisfaction, and increase residents. One assumption made when selecting the tools, is that perception of a neighborhood may be misaligned with reality, even for those who live in the district. With the influx of growth in the Discovery District since 2010 (Social Explorer, 2016), it may be even more difficult for residents, employees, and students alike to keep up with developments. This perception mismatch may be cause for dissatisfaction in the current retail mix.



The second assumption is that business site selection is not based on how the retail mix meets physiological needs. The framework for defining needs was based on Maslow’s Hierarchy of Needs due to its inclusion of frequency and triaging of what need (and therefore businesses that meet those needs) is desired more often than others – see Figure 1.2 for

frequency of needs. To define Maslow’s Hierarchy of Needs, see figure 7.2 on page 56 of this thesis.

**Both the community perception of retail mix (what is there versus what do people use or think is there) and identifying “need” gaps through the lens of Maslow’s Hierarchy of Needs might be able to improve business retention and community satisfaction. This thesis proposes that adding the intake of community perception data and analyzing businesses in communities based on Maslow’s Hierarchy of Needs might provide a more robust decision-making framework for business site selection.**

The perception data tool is based on behavior-change logic models used in the public school system (see ASCA Model, n.d in appendix). Both public and private school administrations found that infrastructure data measurement is not enough to result in knowledge increase, behavior changes, or improved outcomes. The administrators found that the missing link is the role of perception (the student’s beliefs, knowledge, and capabilities). Once perceptions were quantified as data, then behavior changed and outcomes improved. For example, providing after school tutoring is not always enough to increase test scores. Do students know where the tutoring is offered? Is the time of the tutoring convenient for the majority of students? Once the school administrators took in perception data and adjusted their programs according to feed back- then test scores increased. It was not enough to provide the programs. The perception of the programs was the missing link in behavior change and it gave insight into student needs to help them achieve.

The argument of this thesis on perception data is that cities can take the public and private school example of using perception data and apply it to perceptions about the businesses in the community. What perceptions of the retail mix are causing those affiliated with a neighborhood to be dissatisfied? Is a business’s facade discouraging, or is the grocery store

perceived as too expensive so no one shops there? Perception data could be a tool to determine whether the business meets customer needs.

The idea to use Maslow's Hierarchy of Needs was based off the desire to understand the purpose of a business in a neighborhood. This thesis aims to see if striving towards a psychological-based retail mix ideal could improve business retention and community satisfaction. The structure of our built environment can provide opportunities to purchase some types of goods more often than others. The businesses a neighborhood contains can affect resident exposure to business types, professions, and content. This exposure may affect the lifestyle people develop. For example, if a neighborhood is mostly churches, auto-related lots, and fast food, this community retail mix exposes the neighborhood to different opportunities than a neighborhood with a Whole Foods, a luxury movie theatre, and an art museum.

The exposure to businesses within a neighborhood can also affect how comfortable someone is with an entity- like feeling that going to an art museum is normal versus never being exposed to one. Retail mixes provide opportunities (or lack of opportunities) for service access and this may have an effect on an individual's quality of life. Quality of life indicators like income equality or health may have strong relationships to community perception and retail mix. It may be possible to answer questions like: does a retail mix matching the ideal based on Maslow's Hierarchy of needs have a physically healthier or more diverse community?

A business providing a need, for example, a grocery store (Maslow Level 1) alone does not create behavior change – e.g. an expensive grocery store in an impoverished neighborhood would not satisfy the need for food because the food would not be accessible monetarily. Perception of the grocery store and barriers to buying fresh produce may also need to be addressed beyond just building the store. Building both the store and taking into account

community perception could increase the chance of more optimally improving an area.

Understanding these barriers and perceptions can affect business success and could be grounds for negotiation to invite a store type that would not have moved into a neighborhood on demographic data or consumer spending data alone.

City officials, planners, and stakeholders involved with the business site selection process need to be aware of the retail mix in neighborhoods and how this affects a community's quality of life. To reiterate, the tools to improve neighborhood retail mix are perception data and retail mix analysis based on Maslow's Hierarchy of Needs. Then, the city officials' visions of business developments can be compared to the expectations of the citizen needs and desires.

## **II. LITERATURE REVIEW**

### **A. Business Site Selection Methods for Small Business Owners**

For a small business owner or startup, choosing a business location can be complex and an important determinant of success or failure. (Torres, 2014). Jack Kilmartin, the CEO of Mervyn's told *The Wall Street Journal* that "the need to accurately assess the (real estate) market is as vital as it always was — maybe more so given the overabundance of retail real estate" (Thau, 2014). This overabundance of options, information, and development makes it difficult for developers to feel comfortable implementing projects.

Popular advice to business owners on websites like TimeMoney.com and Entrepreneur.com outline that the perception of their business affects consumer spending behaviors and consumer knowledge about their business. Marketing is built around this truth (Allen, 2017). Scott Allen with *TheBalanceSmallBusiness* writes that the process of business site selection uses the foundational concepts taught in "introductory marketing courses: "Four P's: Price, Product, Promotion, and Place" (Allen, 2017). Place refers to "distribution and location...

where the customer receives the product or service". For products that are virtual or consulting location is less critical, but location is "critical for restaurants, retailers, and... service businesses" (Allen, 2017). Allen writes, "while place is often the most permanent of the four P's, it's also often the most overlooked—which is why business site selection makes a significant impact on its performance" (Allen, 2017).

Reputation, style, image, history of the site, and prestige are also factors advised in Allen's article. He mentions that a "downtown address [could] add credibility" or "wealthy clients [could] favor a business in their own neighborhood" (Allen, 2017). The "part of town" the business is in should be "consistent with the image" of the business and "rent varies greatly according to location" so business owners are to be intentional about the credibility a pricer maket may add to their business (Allen, 2017). When considering history of the site, if a site has had several failed restaurants, the assumption is that consumers will also expect a restaurant to fail if one wer to open (Allen, 2017). If site history is looked into, this would start to utlize perception data. However it would be more useful to ask the community why they feel that way and address the barriers described to prevent future business failure.

Additional charcteristics that popular advice to business owners says to consider "foot traffic, accessibility, parking, safety, convenience, ordinances, building infrastructure, and utilities" (Mandelbaum, 2016). Proximate "well-lit parking" and "security on the premises" make a difference depending on most common mode of transportation customers would be using. Traffic counts—of both vehicles and pedestrians, provide insight to the customers that will see the business (Mandelbaum, 2016). Another article gives a direct outline of how a traffic count and general perception of the community can be obtained. Landau suggests, "visually study who comes in and out, taking note of age, gender, how they're dressed and what they drive. Use these

as proxies for income” (Landau, n.d). While visuals are important, the lack of verifying these perceptions against data could lead a business owner astray.

According to the Small Business Administration website, planning and researching a business location calls for "looking at demographics, assessing your supply chain, scoping the competition, staying on budget, [and] understanding state laws and taxes” (U.S Small Business Administration, n.d). Figure 2.1 shows a list of the resources suggested by the United States Small Business Administration for business site selection tools and research. The list is a comprehensive access point for business owners to know how to start a site selection search. The list includes: “general business statistics, consumer statistics, demographics, economic indicators, employment statistics, income statistics, money and interest rates, production and sales statistics, trade statistics, and statistics of specific industries” (U.S Small Business Administration, n.d).

Focus	Goal	Reference
General business statistics	Find statistics on industries, business conditions	<a href="#">NAICS, FedStats, Statistical Abstract of the United States, U.S. Census Bureau</a>
Consumer statistics	Gain info on potential customers, consumer markets	<a href="#">Consumer Credit Data, Consumer Product Safety</a>
Demographics	Segment the population for targeting customers	<a href="#">American FactFinder, Bureau of Labor Statistics</a>
Economic indicators	Know unemployment rates, loans granted and more	<a href="#">Consumer Price Index, Bureau of Economic Analysis</a>
Employment statistics	Dig deeper into employment trends for your market	<a href="#">Employment and Unemployment Statistics</a>
Income statistics	Pay your employees fair rates based on earnings data	<a href="#">Earnings by Occupation and Education, Income Statistics</a>
Money and interest rates	Keep money by mastering exchange and interest rates	<a href="#">Daily Interest Rates, Money Statistics via Federal Reserve</a>
Production and sales statistics	Understand demand, costs and consumer spending	<a href="#">Consumer Spending, Gross Domestic Product (GDP)</a>
Trade statistics	Track indicators of sales and market performance	<a href="#">Balance of Payments, USA Trade Online</a>
Statistics of specific industries	Use a wealth of federal agency data on industries	<a href="#">NAICS, Statistics of U.S. Businesses</a>

**Figure 2.1 - Market Analysis and Business Site Selection Tools, (U.S Small Business Administration, n.d.)**

Efforts have been made to make the advice in these popular articles and the data available by the U.S. Small Business Administration backed with more validity and given greater perspective. Businesses have been able to use geographic information for site selection by “identifying markets, determining if a service is needed, identifying other services in the same area, and what products to shelve” (Writer, 2017). Business owners now have data on the geographic location of their competitors with technology like GIS mapping” (Thau, 2014). GIS mapping can also allow greater access to consumer spending data (Thau, 2014).

Consumer spending data provides information about “how much consumers... spend on a specific product or service, and... how these characteristics have changed over time” (Mandelbaum, 2016). “Consumers’ lifestyles, beliefs, values and attitudes shape their buying habits - the kinds of products and services they are most interested in purchasing. These purchase behaviors are referred to as psychographic characteristics” (Hill, 2017). The Bureau of Labor Statistics publishes a Consumer Expenditure Survey that “analyzes the buying habits of American consumers” (Hill, 2017). Once a site has been selected, business owners are advised to “analyze the demographics of a competitor’s neighborhood in rings of three, five, and 10 miles” (Mandelbaum, 2016). If an area and its demographics have historically have been able to support X business types, a store is more likely to move to the identified location. Geographically representing business locations allows business owners to utilize the clustering effect by encouraging complementary goods to locate proximately to each other (O’Sullivan, 2018).

O’Sullivan describes urban economics as putting “economics and geography together, exploring the geographical or location choices of utility-maximizing households and profit-maximizing firms” (O’Sullivan, 2018). Urban economics explains the clustering effect that business owners have also noticed- “think Silicon Valley for the tech industry, or how a Dick’s



Sporting Goods or a GNC might be more profitable next to a gym” (Landau, n.d). Urban economics identifies inefficiencies in location choices and examines alternative public policies to promote efficient choices” (O’Sullivan, 2018). To put the expectation that houses and business are solely to be maximized disregards the drive to add a business or house that could provide even a slightly less marginal benefit. Maximization is an extreme lense to apply to business site selection on a small business scale. Looking at business site selection from than a profit-maximizing view ignores the benefits of looking at business site selection from a humanistic view.

In an attempt to understand business services from a humanistic view, popular articles again say, “companies succeed by supplying products and services that meet the current most-pressing needs and wants of customers” (Hill, 2017). Business owners should “constantly monitor the market to identify when these needs change” (Hill, 2017). If business owners should do this, market opportunities will present themselves by identifying “where competitors are falling short of customer expectations” and determine what can be done better. “An unmet need in the marketplace becomes your company’s opportunity” (Hill, 2017). While this makes sense on a national and international scale, neighborhood small businesses may not need the pressure of brand new ideas. Businesses should not soley open if it meets a never heard of demand in the market. Humans have continuous, intrinsic needs and the lack of their presence in neighborhoods can decrease quality of life – think food deserts.

However, sometimes improvements or efficiencies to current markets can be made by understand consumer perception. Startups and corporate companies have developed a “designer for user experience” role for this purpose. They can gather information about customer needs by “conducting customer surveys and asking prospective customers what features of products or

services are most important to them. The market need could arise from a problem that customers seek to solve or a personal or professional goal they seek to achieve” (Hill, 2017). For instance, if a “consumers’ goal is saving money on energy bills, [this] has given rise to a host of solutions including more energy-efficient appliances and retrofitting homes so heating and cooling systems operate more efficiently” (Hill, 2017).

Again, the larger scale the product or businesses the more markets they need to analyze. For corporate and large companies, site selection and location science are a well-developed fields. There is a Site Selection Guild and a Site Selection Magazine. Location science is for larger facility locations using mathematical formulas to determine the best “weights between pairs of facilities and distances between the same number are given. The problem is to find the assignment of facilities to locations that minimizes the weighted sum of distance” (Laporte, 2015). Site Selection Magazine contains “qualifying criteria for new and/or expanded corporate real estate facilities” (Conway Projects Database, n.d.)

The Site Selection guild describes site selection as an often infrequent event for many companies. However small businesses do not have the magnituded of employees, land, and scope their prodcut is sent that large companies do. Considering that the Discovery District has several large entities, the small business mix is wiser to focus on creating tangible change. However, if a large corporate retail like Kroger or Target want to move to the district, this process is important.

It is imparative to communicate to the community and business recruitment entities that corporate site selection focuses on “maximiz[ing] efficiency and ensur[ing] that a location will yield both short-range and long-term benefits” (Site Selection Guild, n.d). There are site selection consultants who “follow a process for eliciting real-time knowledge of operating conditions in the targeted area or region” (Site Selection Guild, n.d). While for corporate

companies, location may be more dependent on proximity to logistics companies and far beyond Maslow's Hierarchy of Needs, it is still important to put these corporate practices into consideration for understanding neighborhood retail mix. For example, with the Discovery District containing companies like Motorist Insurance, it is important to understand the impact of the company on the community and the perceptions surrounding the purpose of its location. Overall, even with current tools and methods of both small and corporate business site selection may be leaving neighborhoods with suboptimal results due to reliance upon demographic historic spending or profit maximization.

### **B. Community Engagement Methods & Business Site Selection Recommendations by Urban Neighborhood Planners**

In the case of small business recruitment, planners might approach site selection differently than a business owner would. Profit maximization is not always a top priority of a planner. "Economic planning, in its simplest sense, deals with the planned as opposed to market distribution of goods and services. The theory of economic planning is concerned with who controls, the scope of control, and the legitimacy of controlled goods distribution" (Burchell, 2013).

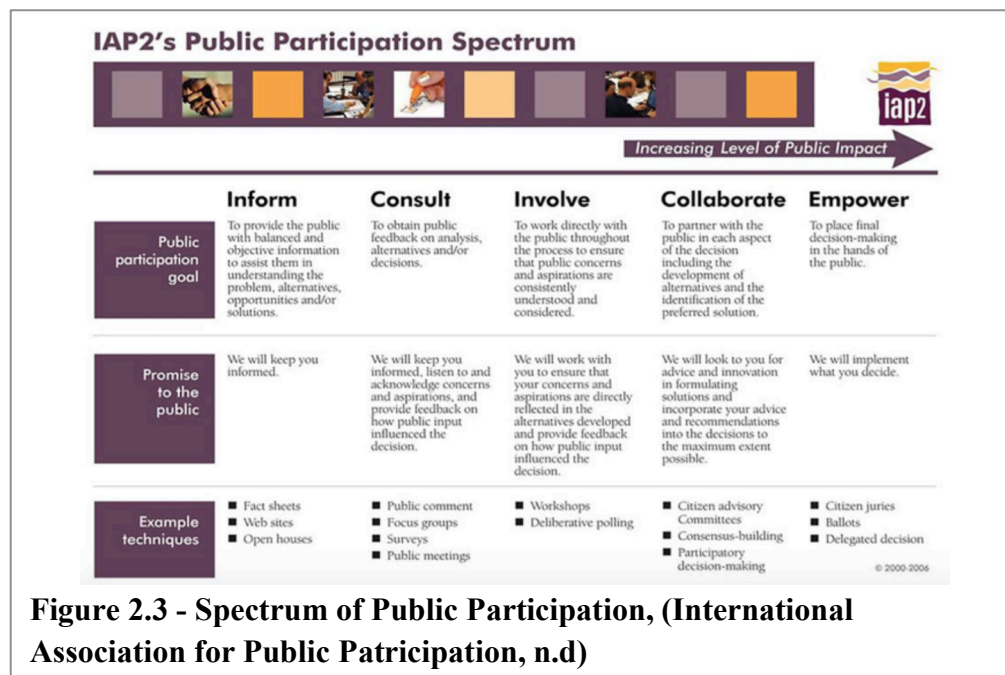
Sometimes the desires of a business owner are not always met with support from the community- think an adult store or liquor store choosing to locate next to an elementary school. "Planners, in particular, have the responsibility of gathering and evaluating available data, as well as accurately presenting future consequences of different action proposals to all stakeholders" (Wang, 2007). Planners can help facilitate the interests of the community in the face of a conflict about a future development. However, the level of community engagement can

create vastly different outcomes. Five different levels of community engagement are commonly practiced and are contained in Table 2.2 below.

Exploration	Word Café, Focus Groups
Consultation	Charrette, Deliberative Poll
Advisory	Citizen Advisory Board, Visioning Process
Decision-Making	Negotiated Settlement, Consensus Meeting
Implementation	Collaborative Planning, Partnerships

(Table 2.2 – Planning for People, Van, Maasakkers, 2017).

The first three levels of exploration, consultation, and advisory ask invited members of the community to discuss ideas surrounding a topic of improvement. The last two levels more directly link the parties to a tangible outcome as they have monetary means to implement a project. The details of these methods of engagement can be found in most community engagement texts and are not included in this thesis. The amount of engagement is more imperative to explain due to the intended outcomes that community engagement methods can create. A spectrum of inclusion and level of desired feedback is below in Figure 2.3.



**Figure 2.3 - Spectrum of Public Participation, (International Association for Public Participation, n.d)**

Community feedback is intended to allow community ideas and concerns to be heard. The pillars of conversations centered on neighborhood improvement usually include health and safety, transportation, education, housing, small business development (Neighborhood Design Center, n.d). Tools that can be used within engagement methods surrounding these topics of conversation are a SWOT analysis and asset mapping.

The SWOT analysis is another tool used in identifying a community plan. It is “made up of an assessment of strengths, weaknesses, external opportunities and threats from competition, provides an outline for strategic decision-making” (Colbert, 2017). In planning and development, the framework is often based on specific buildings or community groups. For example, a vacant property might be chosen as an opportunity, but a strong church group organization willing to invest may be chosen as a strength.

Asset mapping allows strong entities and members of the community to create solutions using their current strengths and systems. (Kretzman, 1993). Before asset mapping, planning methods used to analyze communities based on what was missing in the community. This often occurred without consulting the community of what they think their needs are. Asset mapping drew on the psychological data that strengths are more easily improved than weaknesses are compensated for. (Kretzman, 1993).

Planners can provide a multitude of ideas to improve communities, but the implementation by the current community is key to the success of the plans. In order for community plans to be possible, the community should believe they are capable of implementing improvements and understand why specific aspects are being implemented. Community members should be empowered to know they have skills to contribute to improving their neighborhood and choosing recommendations (Kretzman, 1993). A community can often know perceptions and areas of need

that land use analysis cannot show on its own. However, only ask for input from the residents, can put a tremendous amount of pressure on the community to know what's best solely going off of their lived experience.

Perceptions can be misaligned and this can skew desired additions. This tool proposed in this thesis provides a framework for increasing communication between community members and business entities. In the instance of this thesis, the number of business addition suggestions was reduced after being presented with the retail mix. There was a knowledge increase and perception alignment beyond their lived experience when presented data. Community members had an increase of awareness to current services and therefore reduced their suggestions. This signifies a lack of communication to the community about what is present and how the community could be better utilized. It also allows the community to give better feedback from being presented with data.

Data is a tool that can help change perceptions. In the same way that community members may have misaligned perceptions, the ideas and perceptions of planners may also be inaccurate. There can be a disconnect between how planners and officials view a community and how the community views itself. Entities like the Columbus Downtown Development Corporation and the Discovery District Special Improvement District worked with public and private entities to develop a Downtown Columbus Strategic Plan in 2010 and there is a direct disconnection in perception.

The 2010 Downtown Columbus Strategic Development Plan created a map highlighting major institutions downtown. The map then shows a 5-minute walk radius from the institutions. This map is based off the knowledge that the average person will limit himself or herself to a ¼ mile radius (Walker, 2011). This map highlights the areas available to encourage connectivity

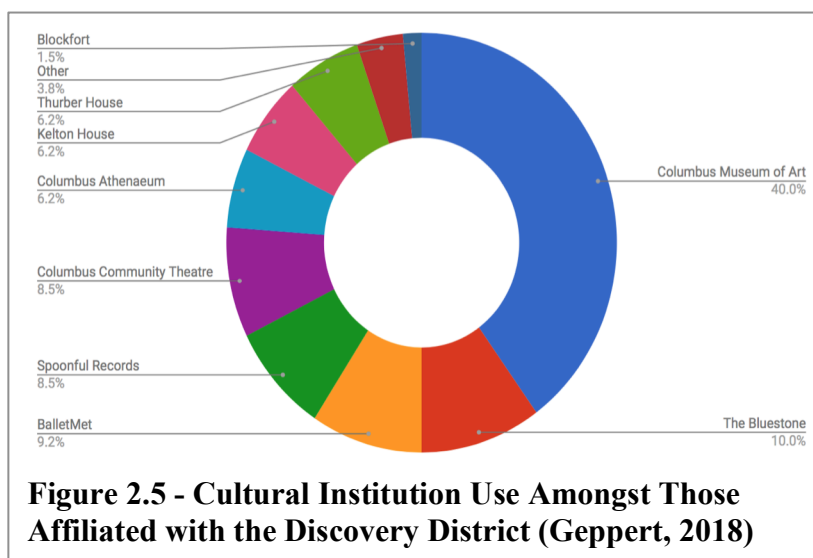


**Figure 2.4 – Major Downtown Destinations (Downtown Columbus Strategic Development Plan, 2010)**

and where there are gaps for people to walk from one institution to another.

However, the Columbus Museum of Art is not listed, which would connect the Discovery District vertically. The lack of the Columbus Museum of Art may distort community perception to believe that downtown does not have enough institutions. This perception may deter visitors from exploring downtown or

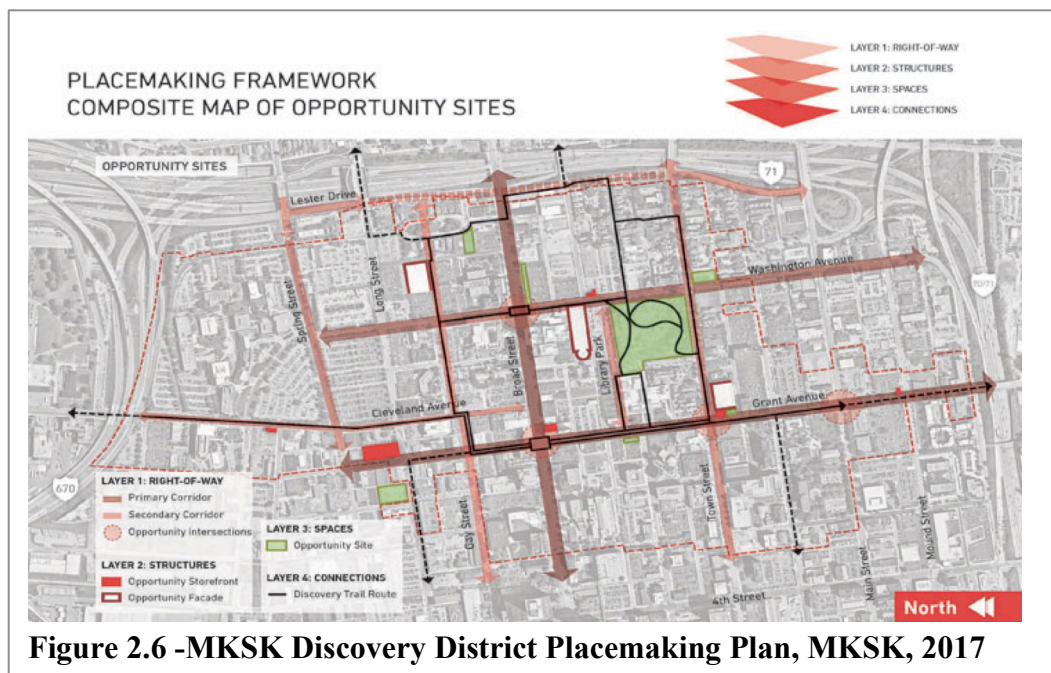
considering it an arts district because of the lack of information. In survey results that I received, the Columbus Museum of Art was the most frequently visited cultural institution in the district. BalletMet and the Columbus Community Theatre were also widely visited destination spots that could connect the district and change perception.



**Figure 2.5 - Cultural Institution Use Amongst Those Affiliated with the Discovery District (Geppert, 2018)**

The Discovery District Special Improvement District is trying to address this perception issue through place making. Figure 2.6 is the proposed place-making Plan from the Columbus design firm MKSK. The place-making proposal is based on the feedback of a lack of

connectivity in the area, resulting in a lack of area knowledge. The “discovery trail” will provide a desired network throughout the district for current businesses, and hopefully improve the perception and knowledge for those less familiar with the district. The “discovery trail” could also provide a clearer framework for opportunities to investment and create businesses in the district.



**Figure 2.6 -MKSK Discovery District Placemaking Plan, MKSK, 2017**

### **C. Business Site Selection Methods for Small Business Recruitment Entities**

There are three main entities in the Discovery District specifically that work on or support the business recruitment strategies of downtown. There is the Columbus Downtown Development Corporation (CDDC), the Discovery District Special Improvement District (DDSID), and the Discovery District Civic Association (DDCA). The CDDC most actively works on facilitating recruitment negotiations, along with the City of Columbus and Columbus2020. The DD-SID and the DDCA create supportive programming and events for the



district and try to improve the district's well being as a whole. Despite the three groups efforts, retail has been slow to returning downtown.

The Columbus Dispatch outlined woes of downtown development. "Residential uses have been increasing downtown in recent years, enough so that downtown recorded its first population increase since 1950. However... residential uses are scattered throughout downtown and in many location downtown there is a lack of critical mass to create neighborhood vitality. In order to encourage new retail and other neighborhood amenities, the residential density issue will need to be addressed" (Matzer Rose, 2016).

The Columbus Dispatch also featured leasing agent Todd Schiff of the Robert Weiler Co in an article about the Highpoint apartments leasing spaces. The Highpoint apartments are just outside of the Discovery District by the Columbus Commons. The Columbus Commons were the response to the closing of City Center Mall in 2007 (Downtown Plan, 2010). Schiff said, "Finding the right tenants took longer than originally expected for several reasons. Retail always follows residential. A retailer doesn't want to sign a lease and wait until they have the critical mass to justify the location. They could go out of business first" (Matzer Rose, 2016).

The lack of other strong retail in the district has "hampered efforts" (Matzer Rose, 2016). However, despite slow growth for business tenants and residential tenants, residential apartments are being added to create more spaces for residents in a hope that creating the spaces will increase downtown residency. High and Rich streets will have "a thousand residents within a thousand feet of that corner," [Schiff said], making it an attractive spot for retailers and restaurants" (Matzer Rose, 2016). With the increase in residents, the retention of the retail and restaurants is crucial to also retain the residents. If business needs are not being met, the nuance of moving downtown may lose appeal. Also, even with the influx of residents "experts in

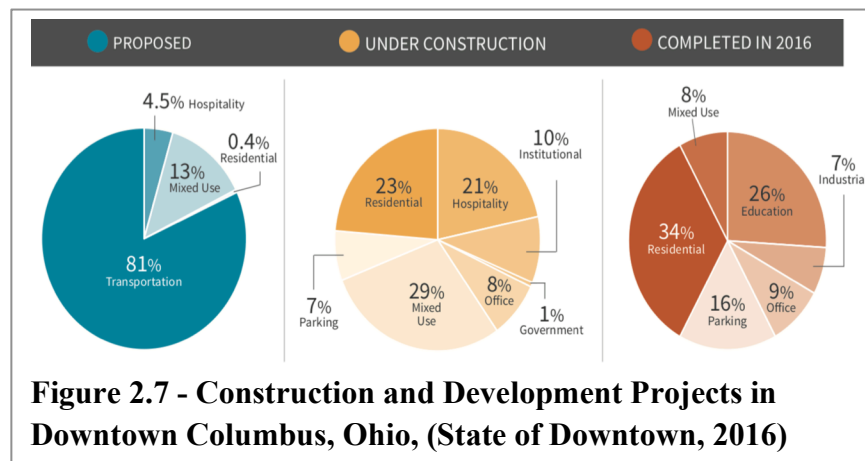
Downtown retail and development don't expect national chains to be flocking to the core Downtown area near Capitol Square" (Matzer Rose, 2016).

Kacey Brankamp, director of strategic initiatives for the Capital Crossroads Special Improvement District, said she is "hopeful that Downtown retail will be sparked by more sections of High Street being filled in with new and rehabbed street-level space" (Matzer Rose, 2016). Brankamp describes that the "interest has always been there on the part of local and independent retailers. The problem has been the lack of appropriate space that's ready to lease, affordable and clustered among other retail storefronts in an area where there's consumer traffic. We're on the cusp of having the type of corridor that eventually turned the Short North into a shopping destination" (Matzer Rose, 2016).

The proposed cusp included new developments in the Highpoint that are "an Arizona-based brewpub, Blasted Barley Beer Co... Posh Nails salon and... Pinot's Palette, a franchised purveyor of painting-and-wine parties. The new tenants will join a juice bar... Pure Pressed Organic Juicery and [Asian cuisine restaurant] Hai Poke... Swan Cleaners will [also] be moving in" (Matzer Rose, 2016). The west side of the Scioto River is also slated to see new developments. The CDDC describes their infrastructure design process in the Dispatch, "Graham Wyatt, Principal of Robert A.M. Stern Architects, was hired by the CDDC to develop the plan. It was based on a market report completed by Hunden Strategic Partners that estimated how much residential and commercial space could be optimally accommodated on the site." (Warren, 2017).

The below Figure 2.7 is the proposed and completed developments in downtown Columbus from the 2016 State of Downtown. These developments are about creating the spaces matching Brankamp's description and the intentions of the west side of the Scioto River

development, an effort to build the mixed use and residential properties that would attract residents and business owners alike, a more livable environment. Not to say that new



**Figure 2.7 - Construction and Development Projects in Downtown Columbus, Ohio, (State of Downtown, 2016)**

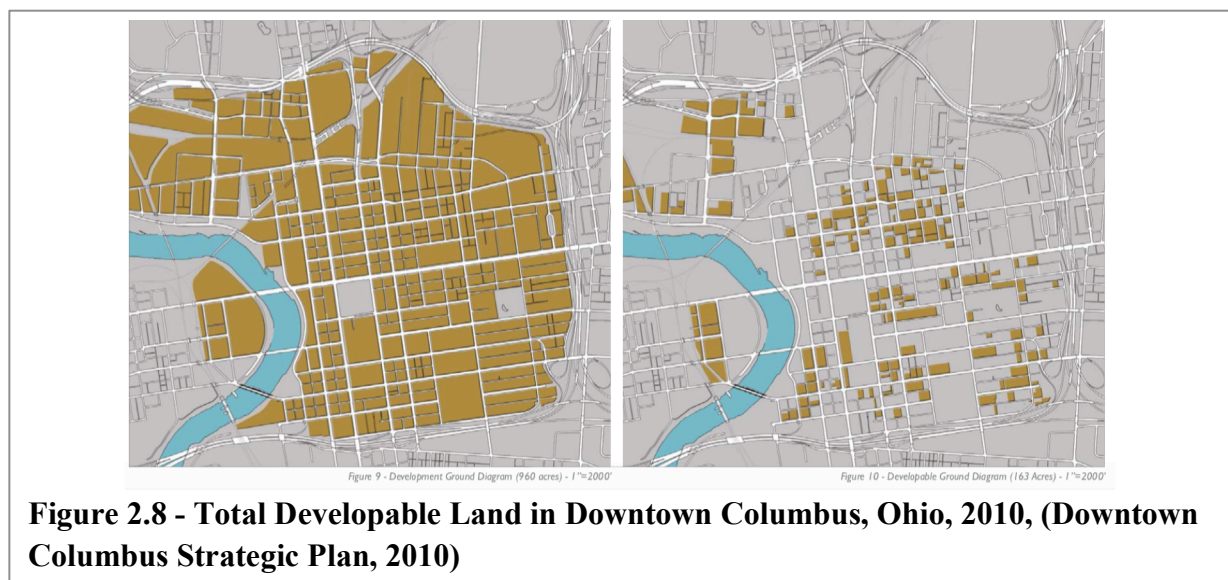
development is not needed; however, downtown had “152,000 square feet of vacant retail space along High Street alone” already in 2010 (Downtown Plan, 2010). The retention and

improvement of the businesses trying to move in, and who is already downtown, is just as important as creating new spaces.

The below Figure 2.8, from the Downtown Columbus Strategic Development Plan highlights all the parcels, sans Right-of-Ways, within downtown on the left side of the figure. “An analysis of large property ownership downtown also reflects the high number of government uses. A significant amount of land is owned by Franklin County, the City of Columbus, the State of Ohio and the United States Government. Other large landowners include museums, theaters and educational campuses. Almost one-third of all land downtown is held by public entities or large institution” (Downtown Plan, 2010). On the right, all government or institutionally owned acres are subtracted to show the amount of “realistically available redevelopment grounds”, which is only 17% of the total 960 acres (Downtown Plan, 2010).

This map is imperative to addressing the perception that downtown can be readily developed and the development opportunities that are available. With 83% of the land in downtown not available to develop privately, this could leave the community frustrated that their

small business needs are not being met. If the community did not know the land allocation and its ownership, they may be frustrated with the lack of development and feel it is a convoluted process to propose development desires. Also, this many large institutions is a immense stakeholder group to consider which may slow development and may cause community members to feel out of the loop. This feeling can be heightened if community members are not even aware of some of the entities that control land downtown, as the survey results on perception and awareness in this thesis start to give insight to.



#### **D. Economic Development Strategies of Cities**

On a city wide scale, neighborhood retail mix is even more complicated. There is a need to factor in mobility and community trade areas. Business recruitment entities nationally can use trade areas to understand the range that various businesses reach in their cities. Using Reilly's Law of Retail Gravitation, cities officials or recruitment entities can understand how a retail mix reaches customers. Reilly's Law of Retail Gravitation is a theoretical framework to define a trade area. The law is based on the foundation that "people are attracted to larger communities to do

their shopping, but the time and distance they need to travel influences their willingness to shop in a given city” (Kures, 2011). Essentially this means “people are more likely to travel shorter distances when possible” and “are more likely to shop in larger communities as they typically offer more goods and services” (Kures, 2011).

The two main factors that can determine trade area(s) include: the community’s population and the community’s proximity to other competing business districts (Kures, 2011). In general, the “larger a community’s population, the larger the trade area” is- but there is also a cutoff point where customers are drawn to “a competing center instead of any one community”. (Kures, 2011). To help distinguish competing centers versus sheer size of a trade area, the retail mix in the community is a large factor. “A critical mass of businesses pulls customers from a further distance than a more limited mix of businesses” (Kures, 2011). Destination businesses, like a “large discount department store or community attraction”, can “expand a trade area and draw customers from longer distances”. However, a single business’s trade area “cannot be assigned to the whole community” and other businesses usually do not match the “pull of a prominent destination business” (Kures, 2011).

While trade areas are most useful for large shopping centers and manufacturing facilities, these tools are more difficult on a neighborhood scale. Representing these tools in a community engagement setting could be cumbersome. However, perception is easier to relate to and communicate. City officials have started to recognize how the perception of their cities as a whole affects the types of residents and companies they attract.

The Cincinnati Downtown Strategy Retail Action Plan outlines new initiatives they are adding in order to aid the addition and success of business in the central business district of Cincinnati. The plan has “four components of a retail recruitment strategy” that they believe are

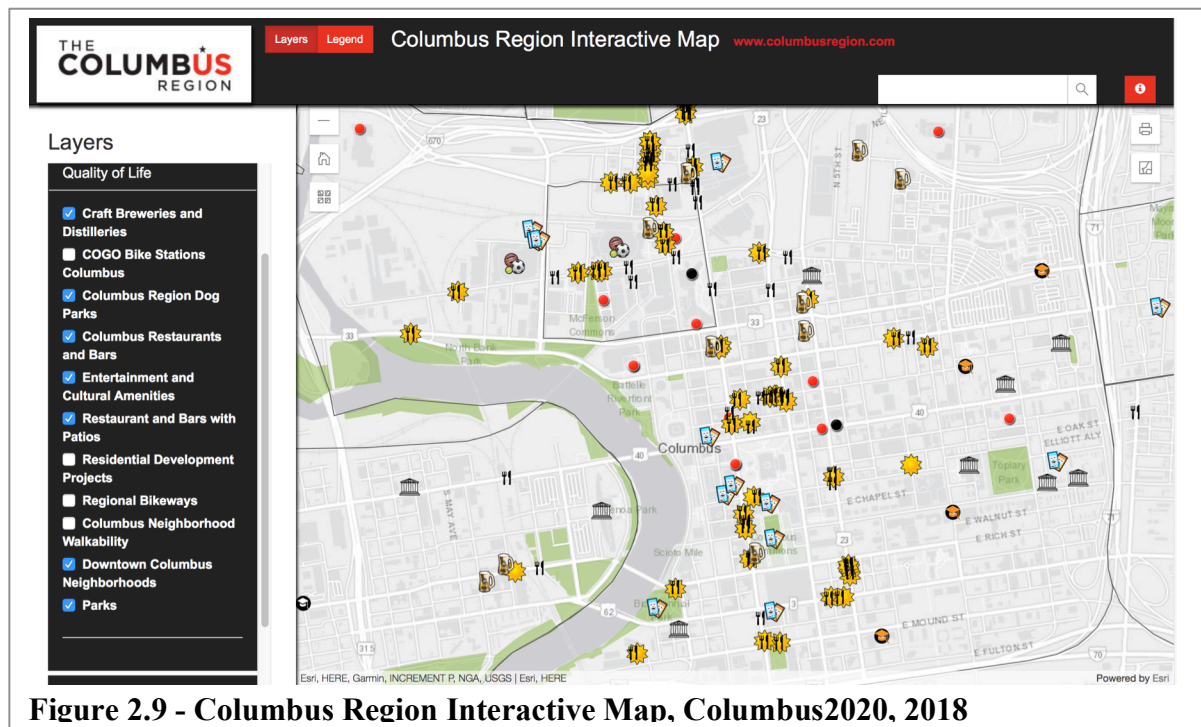
necessary: merchandise mix, focus area, recruitment process and staff, and recruitment tools” (Department of Community and Economic Development, 2016).

Ideas they have developed for the four components of a retail recruitment strategy are an “Inventory Map of Available Property, Create a Development Momentum Map, and Establish a Retail Recruitment Specialist” (Department of Community and Economic Development, 2016).

While the Cincinnati plan additions do not include business perception data – it does involve safety and cleanliness perception data – they recognize that perception of crime can deter investment and visitors and that stigma reduction is needed (Department of Community and Economic Development, 2016). Changing this perception is crucial to new development. The fact that perception of crime is connected as a strong link to economic health and growth causes the natural progression of also integrating perception of businesses and retail mix to add to data profiles in strategic plans. Enhanced data is necessary for developers and important for Cincinnati to understand best retail mix strategies. The plan would benefit from citizen perception data to understand what might make citizens utilize downtown in a sustainable way. It measures the city’s self-perception against the community’s image of the city. It helps identify effectiveness. (Michigan Department of Education, n.d).

Columbus 2020 is taking a broader approach to development than the Cincinnati Downtown Strategy Retail Action Plan by looking for opportunities in 11 counties encompassing the “Columbus Region” (Columbus 2020). The Columbus 2020 economic development strategy gives outlines five tools to aid economic development efforts in Columbus and encourage business growth: “industry intelligence, customized location analysis, international business services, start-up assistance, and business incentives” (Columbus 2020). The Columbus 2020 Regional map also outlines quality of life indicators that can be seen below in Figure 2.9: “craft

breweries and distilleries, dog parks, restaurants and bars with patios, and entertainment and cultural amenities”.



**Figure 2.9 - Columbus Region Interactive Map, Columbus2020, 2018**

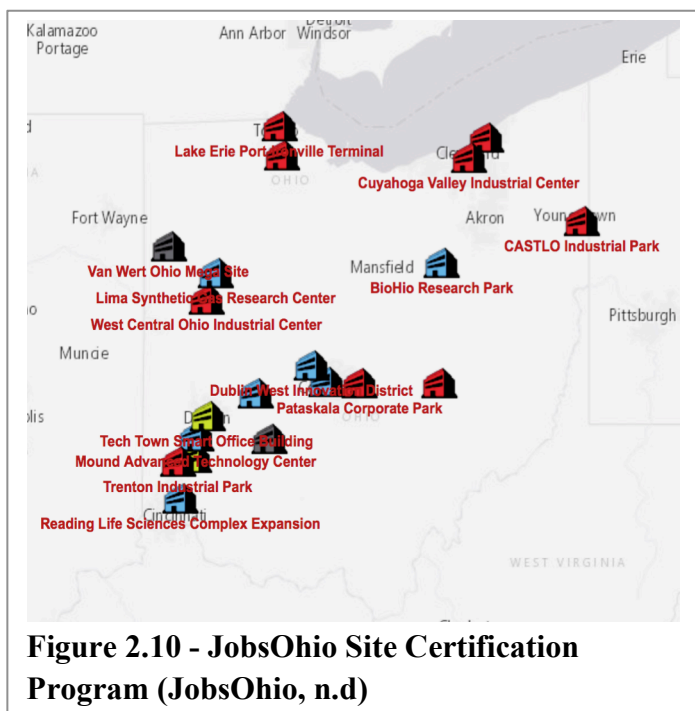
Beyond its quality of life indicators, Columbus 2020 uses industry intelligence, entrepreneurship assistance, and tax incentives. Columbus 2020 can provide “customized research, locally generated data, and the expertise required to navigate state and local networks”. Services include “customized site and building tours, workforce analysis, peer to peer interviews with similar companies, and the facilitation of meetings with local and state officials who administer tax and business incentive programs” (Columbus 2020, 2018). The region has “ample industrial, technological and medical research capabilities through colleges and universities, private sector research organizations and area medical facilities”. Columbus2020 helps facilitate the “network of organizations is in place to assist entrepreneurs, facilitate venture or angel investment and nurture innovative partnerships” (Columbus 2020).

Columbus’ 2020 work has increased company placement and jobs in the Columbus region. Its platforms have value in creating the information that businesses need. As the

Columbus2020 initiative continues, it would benefit from the small business tools proposed in this thesis to start to tailor business recruitment beyond “restaurants with patios” or “dog parks”. While these indicators can be attractive, the needs analysis proposed may provide a psychological framework to know why they improve quality of life.

On a statewide level, JobsOhio, coordinated with the State of Ohio, for a “Site Selection and Certification program. The program speaks to the difficult choice companies face in the site selection process. (Hazelton, n.d) This program “primarily focuses on manufacturing and industrial sites” due to the magnitude of due diligence corporate projects need. The Ohio Job Ready Sites Program was “created to bolster the State of Ohio's portfolio of commercial and industrial developable sites”.

Properties in this program were “strategically chosen for their ability to provide optimal infrastructure capabilities and attract economy-shifting investment. Funds from the Ohio Job



Ready Sites Program were targeted to offset costs traditionally incurred in speculative commercial and industrial development to accelerate investment decisions and to maximize the development potential of each property” (Hazelton, n.d). In order to receive funding from the Ohio Job Ready Sites Program, projects need to satisfy industry standards. These standards

were developed by the “Ohio Development Services Agency and third party engineering and site



selection firms with numerous years of experience in commercial and industrial development” (Hazelton, n.d). This certification program provides a direct tool to large scale businesses trying to decide between state locations. However, similar to the Columbus2020 map, once Ohio, Columbus, and the Discovery District feel like they have the luxury to be more selective of the businesses being recruited. The needs analysis framework proposed in this thesis could provide more understanding of the humanistic value these entities are providing to Ohioans.

Internationally, The International Standardization Organization (ISO, 2015) created a framework to compare city health by creating internationally applicable city indicators. This measurement effort - driven by the approaching need for global sustainability guidelines - aims to give goals – and show why these goals contribute to prospering cities. The ISO framework outlines indicators within a variety of professions to inspire collaboration on key indicators and how they change over time. Each indicator is explained to describe the benefit of every measurement on a societal level. Then the indicators themselves weigh how much value they bring to a city- providing flexibility for various climates and cultures. These measurements meet the need for the framework, but need to be complimented by an implementation plan. These indicators provide a global statistical framework, but the implementation is up to each individual city. A new planning method may be needed to maximize the ISO’s city indicators. The indicators are:

1. City’s unemployment rate
2. Assessed value of commercial and industrial properties as a percentage of total assessed value of all properties
3. Percentage of city population living in poverty
4. Percentage of persons in full time employment

5. Youth unemployment rate (ages 16-24)
6. Number of Businesses per 100,000 population
7. Number of new patents per 100,000 population per year

These indicators can provide economic health and an international perspective of how the Discovery District retail mix could benefit Columbus' overall economic health. The increase in providing and retaining businesses that help meet these indicators is a preferable goal.

#### **E. Innovations in Data Access and its Impact on Cities and Business Site Selection**

The availability of spatial technologies and data dashboards are helping city officials visualize and monitor their city with increasing frequency. These dashboards and visuals can help a city locate hot spots for crime, parking space usage at various hours of the day, or geographically represent and triage blighted properties. However, Places Journal's article compares an "urban dashboard" to mission control for NASA- and why the two do not exactly work the same. In the article "Mission Control: A History of the Urban Dashboard" operating a city through a dashboard makes the assumption that cities can be stripped of "non relevant data" (Mattern, 2015). International artificial intelligence company CARTO reacts similarly, "typically, raw data collected is difficult to work with and contains biases which often lead to errors in decision-making" (Ghosh, 2018). CARTO's Data science team "cleans and removes biases in the data, making it ready for spatial analysis and visualization". CARTO also offers organizations the ability to "combine it with their own data and Location Intelligence solutions for more comprehensive analyses." (Ghosh, 2018). However as a whole, cities are their entirety- meaning that stripping them of "non relevant data" to meet numerical targets can often cut out assets that cannot be traditionally quantified. (Mattern, 2015).

Not all big data companies are taking this approach though. Behavioral economics and perception has its place in business site selection. Biju Dominic, Co-founder, Chief Executive Officer, Final Mile writes “to fundamentally address a challenge or shape the decision-making process, one must identify and understand what truly drives behavior. Organizations can achieve better outcomes by applying learnings from cognitive neuroscience, behavioral economics, and design” (PRNewsWire, 2018). As cities get smarter, it is important to maintain and effort to quantify once seeminly qualitative data like perception or pyschological needs.

Michael Totty’s “The Rise of the Smart City” article outlines why measurement is improved with incorporating perception in cities and how cities are working to improve scores on standards like the ISO indicators: “Although cities have been using data in various forms for decades, the modern practice of civic analytics has only begun to take off in the past few years, thanks to a host of technological changes” (Totty, 2017). The growth of “cloud computing dramatically lowers the costs of storing information” There are new developments in machine learning putting advanced analytical tools in the hands of city officials”. Also, “the Internet of Things and the rise of inexpensive sensors” can track a “vast array of information such as gunshots, traffic or air pollution” (Totty 2017). The capacity of smartphone apps and mobile devices can “enable citizens and city workers alike to monitor problems and feed information about them back to city hall” (Totty 2017). Taking in data has been more accessible than before, perception data and a needs analysis have the capacity to be useful tools.

Totty continues to outline that, the most innovative way cities are employing data is to “anticipate problems.” He describes the correlation to individuals fitness tracking apps- how knowing the data can cause changes in behavior: “Just as individuals are flocking to Fitbits and other wearables to monitor their health, cities, too, are turning to sensors to track their own vital

signs. (Totty, 2017). Through this Internet of Things, “sensor-equipped water pipes can identify leaks, electric meters can track power use, and parking meters can automatically flag violations” (Totty 2017). Expanding on his point of putting the reporting in the people’s hands, he says, “using the public as data collectors isn’t new—it’s the idea behind 911 and 311 systems. But smartphone apps, in the hands of residents and city workers, give cities new and more powerful ways to expand their data-collection efforts” (Totty 2017).

Expanding data-collection efforts continuously provides city entities more information to tailor their city services. Andrew Therriault, Boston’s chief data officer explains how providing opportunities for data input can bring power to the community: “to be as responsive as possible to the public’s needs, we need to listen to their input through whichever medium they choose to share it” (Totty, 2017). Encouraging individuals to share their personal use and opinions provided data that otherwise might not be heard in traditional public engagement. In terms of community perception, monitoring various platforms like Nextdoor - a neighborhood application - or Facebook groups, could provide additional platforms for collecting perception data rather than a separate survey. Surveys are the most tailored way to obtain relevant perception data, but the perceptions and needs are out already on other platforms and data collection efforts can take in data from a multitude of platforms.

### **III. RESEARCH QUESTIONS AND HYPOTHESIS**

**From the above literature review, the following hypothesis developed:** Including perception data and an analysis of retail mix correlating to Maslow’s Hierachy of Needs in a neighborhood data profile will improve neighborhood satisfaction. Community members will understand their own perceptions of their neighborhood and the retail mix within it. They will understand how their perception may be different from reality and this exposure will increase

community awareness. If this data is included in strategic planning, the business infill recruitment will be more meaningful to the community and and business retention will improve. The disconnect between the proposed business ideas developed by city officials, planners, and developers compared to the community's desires from their lived experience should improve.

However, the full hypothesis cannot be tested in one survey. A survey was designed to gather three main criteria to begin being able to answer the above hypothesis. The perceptions about the Discovery District retail mix were gathered. The business use within the district and surrounding neighborhoods was gathered. The desired businesses were gathered. Then, this information was analyzed to provide insight into the two questions below:

1. To understand if presenting business mix information to community members shows a difference in current perception, and/or changes their business infill suggestions
2. To understand where citizens in the Discovery District obtain their basic needs/ which businesses they use (whether in the District or out of the district)

#### **IV. RESEARCH PROTOCOL**

##### **A. Research Design**

The primary research method for this study was a scoping literature review, logic modeling, and qualitative surveying to answer the above stated research objectives. Preliminary research about the retail mix and Discovery District boundaries was conducted by using The State of Downtown Report (Capital Crossroads SID, Discovery District SID 2016), Google maps, and verifying the data with Lisa Defendifer and Marc Conte with the Special Improvement District. The Discovery District Special Improvement District was an integral piece to verifying the retail mix; however the DowntownColumbus.com website has various LLCs or apartment

complexes listed on their “Business Listings” page for the Discovery District that was not presented as a resource at the time of designing the retail mix pie chart.

About 173 results are shown on DowntownColumbus.com, but this thesis is based on the 127 businesses that were verified with the employees of the DD-SID. However, it is also important to note that some businesses on the DowntownColumbus.com site are repeated, see the appendix for examples of the website. Data collected represents current retail mix within the district and provides a pie chart showing business categories that is included in the survey.

The greatest amount of responder input was captured by an electronic e-mail survey that was vetted by The Ohio State University Internal Review Board. The survey was designed to capture the perception of those affiliated with the Discovery District about the current retail mix in the district and which businesses respondents use.

## **B. Sample**

The Discovery District is about a one square mile radius. It serves approximately 18,000 employees, 32,500 students, 2,000 residents, and 127 businesses. The Discovery District created a Civic Association (DDCA) and Special Improvement District (SID) run by various board members who either live, work, or have a passion for the district. The survey asks affiliation with the district (resident, employer is within the district, etc) in order to understand who is responding to the survey. The survey also asked how long responders have been affiliated with the Discovery District to understand how longevity may change perception and response. Surveying the Discovery District population yielded seventy-nine survey responses that were collected over the course of three weeks.

The Discovery District Special Improvement Districts granted access to researcher Margo Geppert to send the survey on their newsletter e-mail listserv of 7,000 members. The SID has

gathered the listserv through various outreach methods at community events and their “Welcome to New Residents” Gift Basket Initiative. The survey was also included in the newsletters for the Columbus College of Art and Design and Columbus State Community College to gain more variety in responses- which helped reach an additional 10,000 responders in the 32,500 students population. This survey was sent to responders to be answered in a private setting promoting honesty and yielding responses despite busy schedules. This method allowed access to the widest community range possible, while also being feasible under the time constraints of the semester.

### **C. Measurement/Instrumentation**

The survey asked respondents to rank the mix of businesses and land uses relative to each other from 1 as “most frequent” to 8 “as least frequent”. The categories within the pie chart are developed from the North American Industry Classification System (2017). Most of the categories meet Sector 44-45, Retail Trade, and are broken down into subcategories in order to allow survey responders more clarity based on the industries within the District, and removing irrelevant sub categories. Both the retail mix and the survey are included in the appendix section of this thesis.

### **D. Detailed Study Procedures**

The only identifying responses in the survey are age, nearest intersection, and how long a responder has been affiliated with the district- however, no responder was identifiable on this information alone. Margo Geppert and Mattijs Van Maasakkers were the only researchers with access to respondents. The responses will be stored on Qualtrics through both researcher’s separate official The Ohio State University logins. All graphs and infographics are kept on

Margo's personal laptop in encrypted files. The survey was estimated to take about 10 minutes to complete. In the consent statement, responders were given both Margo Geppert's e-mail and Sandra Meadow's information with the ORRP office. Additionally, the respondents were given a thank you debrief and an anonymous follow up email of knowltondiscovery@gmail.com as a contact for questions.

All individual responses will be deleted on September 1<sup>st</sup>, 2027. Opting to take the survey resulted in the chance to win a \$10 gift card to a local Discovery District business of their choice- 50 gift cards will distributed by May 15<sup>th</sup>, 2017. Because email is collected in the survey, the thank you prompt that notified responders that an email would be sent notifyinf them as a winner and address would be requested in the e-mail to mail the gift card. There was about a 1 in 50 person chance of winning the gift card given that 2,500 people would respond to the survey; however, 43 responders gave their email, so all 43 responders received a \$10 gift certificate. Their address information will not be recorded for any results purposes. The e-mails with gift card recipient address information will be deleted after all gift cards are mailed by May 1<sup>st</sup>, 2018 and all winners will be notified by April 30th, 2018.

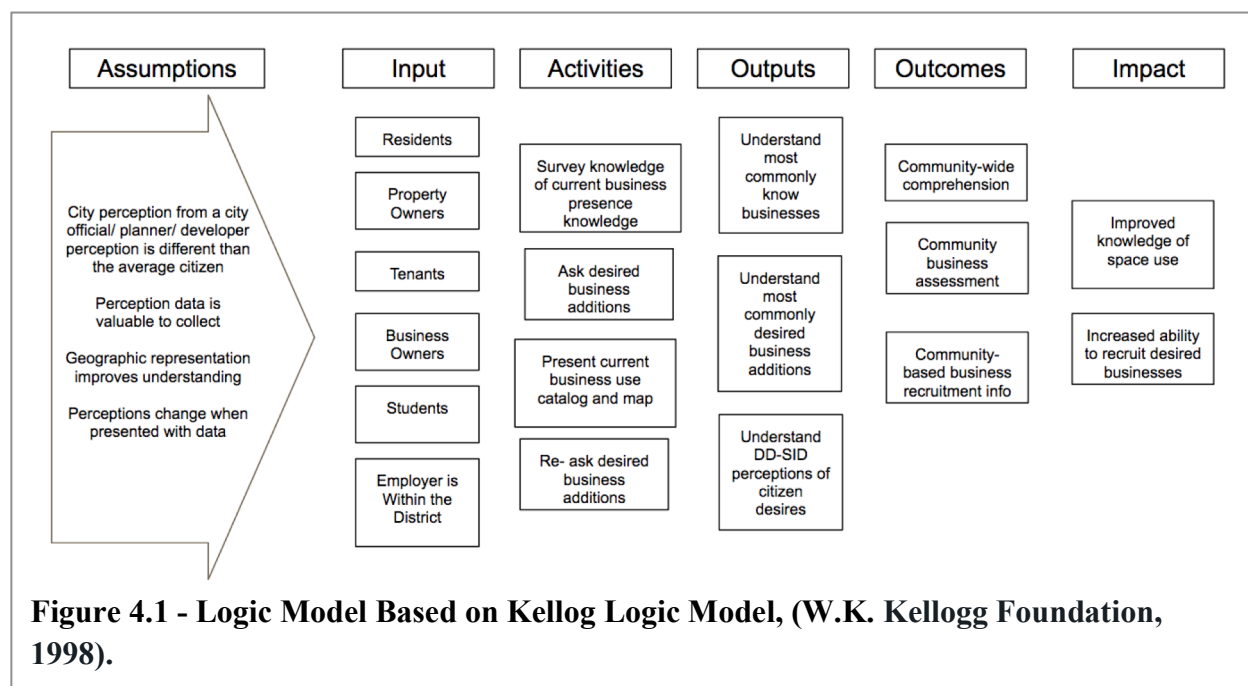
### **E. Internal Validity**

Choosing to use an e-mail newsletter created some self-selection bias- that those on the listserv have a greater interest in the Discovery District than others who may not know about the newsletter. The survey asked respondants their affiliation with the district and the longevity of their association, to minimize bias. Respondants were also asked the nearest intersection to their place of association in order to add validity to the responses.

### **F. Data Analysis**



The data was analyzed in association with age, race/ethnicity, association with the district, and longevity in the community. The race/ ethnicity categories were developed from National Institute of Health (2015). Infographics were then made to compare and contrast what is present in the community, the perception of the community on existing infrastructure, and if citizens shop for their needs within or outside of the district.

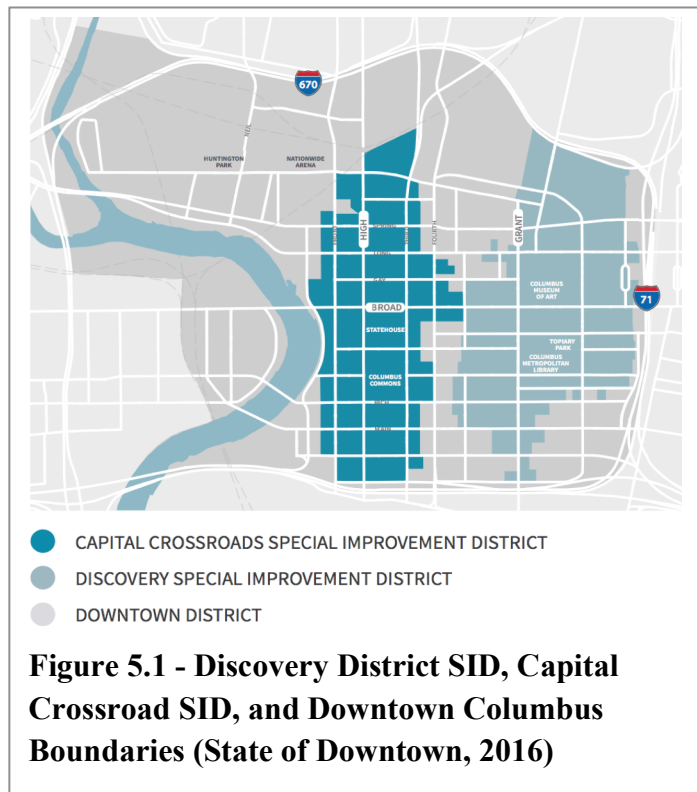


The above logic model is based off an outline of the process to achieving desired outcomes used by the W.K Kellogg Foundation. The logic model was adapted to fit the pupose of this thesis and to clearly communicate the intentions of the survey.

## V. INTRODUCTION TO CASE CONTEXT: DISCOVERY DISTRICT STATISTICS

The Discovery District in Downtown Columbus, Ohio is one of two neighborhoods in downtown: Capital Crossroads and the Discovery District. Both neighborhoods have seperate special improvement districts. When consulting with the SIDs for a boundary for the Discovery

District neighborhood as a whole, beyond the SID, the boundaries were 5th Avenue to the west, which some of the Discovery District SID spills over. However, the other three boundaries are I-71 to the East, I-670 to the North, and I-70 to the south.



Based on Block Group 3, Census Tract 30, and Block Group 2, Census Tract 40 in Franklin County, Ohio, demographic statistics about the district from Social Explorer are in the appendix of this thesis. The demographics of survey responders can be compared to the Social Explorer data.

Columbus Business First cited the zip code 43215 (which encompasses

all of downtown) as the 13th wealthiest zip code in a list published in February, 2018. The population is 13,807, the median household income is \$55,490, and the median owner-occupied home value is \$257,600 (Columbus Business First, 2018).

43215 is in the 90th percentile for wealth in other America cities - only 10% of zip codes in the United States are wealthier. Ten other zip codes in Columbus are in the 100th percentile. On the 2017 Columbus Business First wealthiest zip code list- the same zip code did not even make the list (Columbus Business First, 2017). This rapid growth may be another indicator that the current perception does not align with reality and the current retail mix does not align with the influx of residents.

## VI. RESULTS

The survey received 80 responses total, 70 responses of which were from respondents that were 18 years old and who mostly completed the survey. The average age of survey responders was 36 years old.

Average Age	36
White	44
Asian	2
Latino	1
Black	2
No Response on Race/ Ethnicity	21
Responses	70

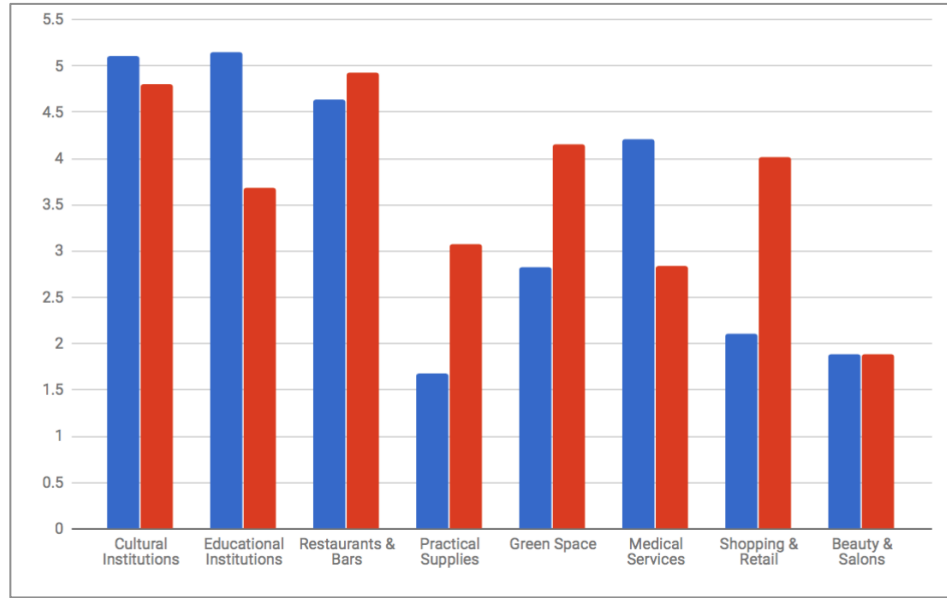
**Table 6.1 – Age, Race, Ethnicity, and Number of Respondants**

Below represents the average desired category type and its prevalence in the Discovery District. Respondents were asked to rank categories 1 through 8 both before exposure to the retail mix and after. Before, responders were asked to rank which categories were most prevalent to least prevalent. After seeing the retail mix, responders were then asked to rank which categories they would like to see in the District. Values closest to 1 means most desired and values closer to 8 means least desired. The net change is color coded because counterintuitively, if the post mix average is higher than the premix average, this means responders actually would like less of the category in the neighborhood. The net change is represented on the right hand side.

Type	Premix Average	Post Mix Average	Net Change
Cultural Institutions	2.89	3.2	+0.31
Educational Institutions	2.85	4.31	+1.46
Restaurants & Bars	3.36	3.07	-0.29
Practical Supplies	6.32	4.93	-1.39
Green Space	5.17	3.84	-1.33
Medical Services	3.79	5.16	+1.37
Shopping & Retail	5.89	3.98	+1.91
Beauty & Salons	6.11	6.11	0

**Table 6.2 – Perception of Retail Mix Before Presentation with Retail Mix Compared to Desired Retail Mix Post Retail Mix Exposure**

Below represents the above data as a comparative graph across categories. The responses pre-exposure to the retail mix describe a less even neighborhood retail mix, while the responses post-exposure to the retail mix ask for a more evenly dispersed neighborhood retail mix. The values in this graph have been inverted from the survey responses to show values visually. When answering a question it is intuitive to place “1” as your most desired, but visually, “1” looks like least desired. So the tallest bars in this graph represent the most desired, and the shortest bars represent the least desired categories. Figure 6.3 below represents the above table graphically, again with inverse data to reflect the data visually in an intuitive way. The blue is pre mix data and the red is post mix data.



**Figure 6.3 - Perception of Retail Mix Before Presentation with Retail Mix Compared to Desired Retail Mix Post Retail Mix Exposure**

From these results the conclusion can be drawn that presenting retail mix provided a visual for Discovery District community members to respond to and it helped responders put their business suggestions into a context greater than their lived experience.

Below is the total quantity of each business type requested by responders overall. Each category was developed based on the North American Industry Classification System (2017). that was also used to define the categories in the retail mix pie chart in the survey. Target and CVS were placed into their own category, separate than retail, because the two brands were written specifically as a suggestion more often than just general retail. Something about the brand recognition and services provided by these brands is more greatly desired than just a generic store with the same products.

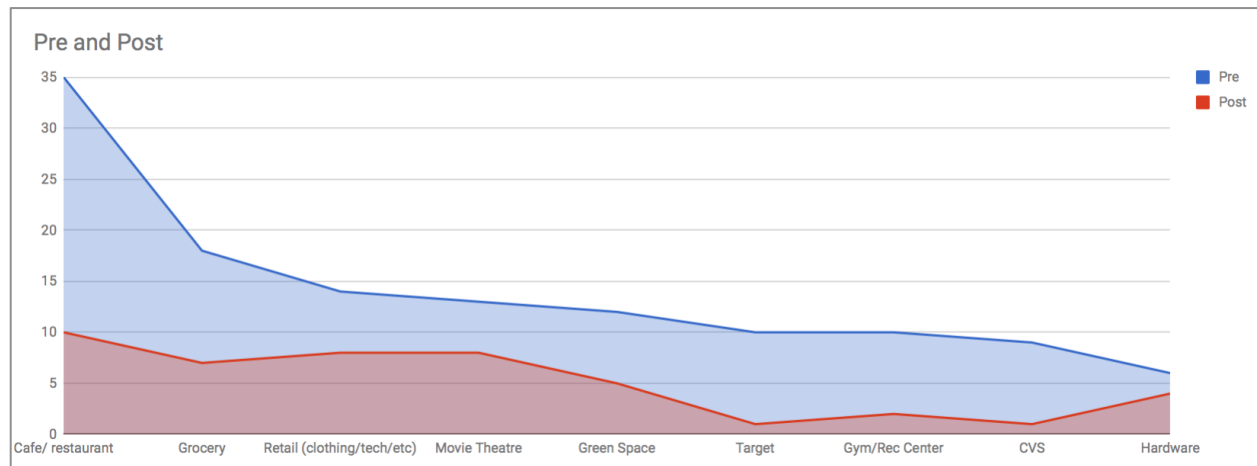
From the net change, presenting retail mix seems to cause a change in business infill suggestions. In every single category, the quantity desired by the community members decreased after seeing the retail mix.

Category	Pre	Post	Net Change
Cafe/ restaurant	35	10	-25
Grocery	18	7	-11
Retail (clothing/tech/etc)	14	8	-6
Movie Theatre	13	8	-5
Green Space	12	5	-7
Target	10	1	-9
Gym/Rec Center	10	2	-8
CVS	9	1	-8
Hardware	6	4	-2

**Table 6.4 – Desired Business Additions Pre and Post Retail Mix Exposure**

It is important to note here that while these are the top business suggestions, the caviot of “affordable” appeared 4 times refering to grocery and dining, twice with gyms, and once with clothing. As all three of those categories fall under Maslow’s Hierachy of Needs Level 1, this desire for “affordability” equates to “accessibility”, especially at the frequency that these needs are bought compared to higher level needs. If a Level 1 business is present, but expensive (or even perceieved as expensive), the neighbors can view the business as inaccessibility. The desire for the business type will remain until the need is percieved as accessible.

Below is the table above represented as a graph. The blue area represents pre mix suggestions and the red area represents post mix suggestions.



**Figure 6.5 - Desired Business Additions Pre and Post Retail Mix Exposure**

The below charts represent the responses of perception change post exposure to the retail mix graph. Table 6.6 is the perceived mix prevalence in comparison to other categories.

Matched My Perception of Business Mix	20	
More Diverse Than My Perception	23	
Thought a Category to be More Prevalent	20	Schools: 11
		Restaurants: 5
		Healthcare: 4
		Arts/ music/ dance: 2
		Parks: 2
		Insurance: 1
		Publishing: 1
		Religious: 1
		Law Firms: 1
		Bars: 1
Thought a Category to be Less Prevalent	22	Restaurants: 12
		Publishing: 6
		Retail: 3
		Healthcare: 2
		Parks: 2
		Schools: 2
		Salons: 2
		Gyms: 2
		Arts/music/ dance: 1
		Religious: 1
		Hotels: 1
		Bars: 1
		Government Entities: 1
No Response	21	

**Table 6.6 – Retail Mix Perception Post Exposure to Retail Mix**



Table 6.7 is the perceived quantity of businesses.

Matched Perception of Quantity of Business	19	Healthcare: 6
		Arts/Music/Dance: 3
		Schools: 3
		Restaurants: 1
		Parks: 1
		Cultural Institutions: 1
		Insurance: 1
		Gyms: 1
		Religious: 1
More Business	27	Restaurants: 7
		Healthcare: 3
		Publishing: 3
		Arts/music/dance: 2
		Gyms: 2
		Salons: 1
		Schools: 1
		Auto-related: 1
Fewer Businesses	5	Parks: 4
		Bars: 3
		Salons: 1
		Government Entities: 1
		Clothing: 1
No Response	21	

**Table 6.7 – Retail Quantity Perception Post Retail Mix Exposure**

Out of the 51 responses relating to retail mix, 42% of respondents said the retail mix was more diverse than their perception of the Discovery District. Restaurants/ bars and Healthcare were thought to be both more and less prevalent, which is interesting considering the two categories have the highest quantity on the retail mix chart. These responses may indicate why

restaurants/ bars were marked significantly less (while still the highest desired category) in the post-retail-mix-exposure results.

### Responses by Years of Affiliation

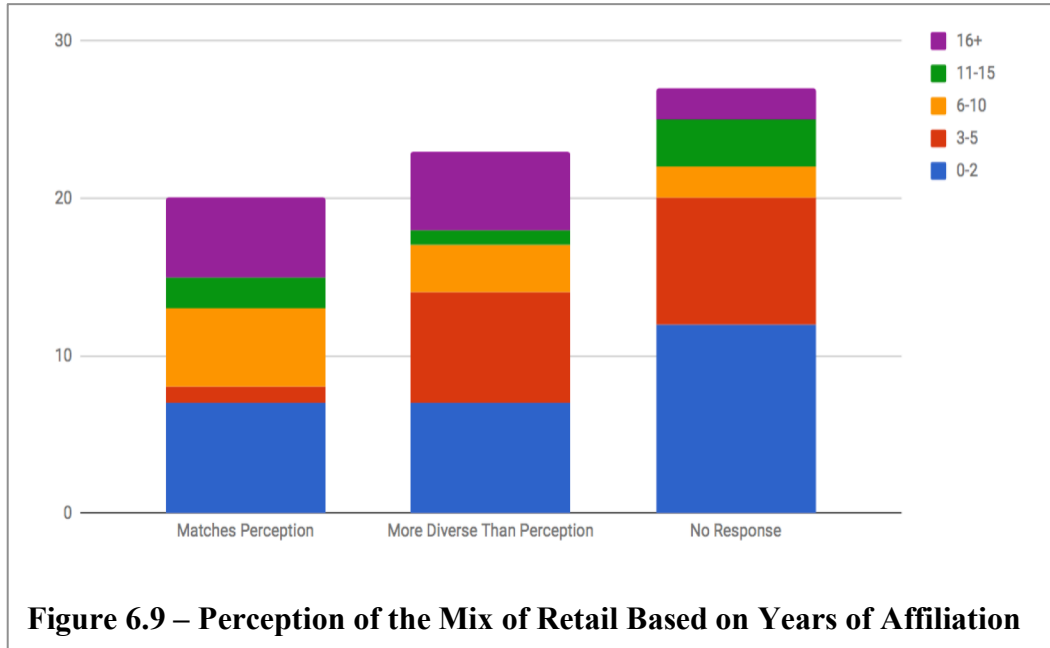
Below, Table 6.8 represents the ages, races, and ethnicities of survey respondents, categorized by their years of affiliation.

	Years of Affiliation				
	0-2	3-5	6-10	11-15	16+
Average Age	34	29	47	53	54
White	14	7	9	4	10
Asian	2	0	0	0	0
Latino	0	1	0	0	0
Black	0	0	0	1	1
N/R	10	8	1	1	1
Responses	26	16	10	6	12

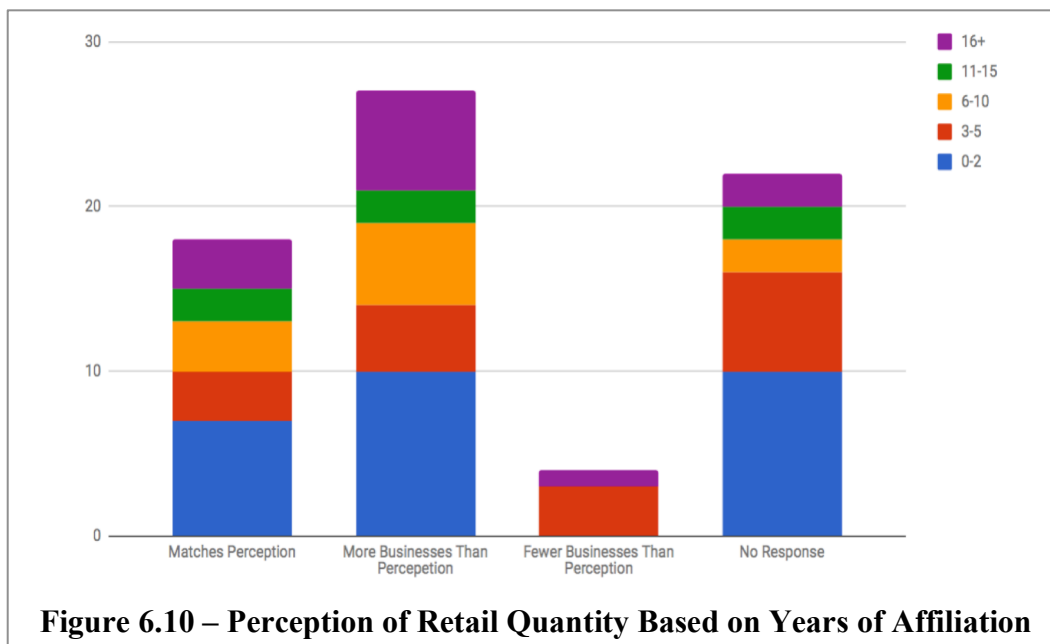
**Table 6.8 – Responder Demographics by Number of Years Affiliated by the Discovery District**

The year of affiliation ranges with the most respondents were 0-2 years (26 responses), 3-5 years (16 responses), and 16+ years (12 responses).

Below is the break down of business infill suggestion based on years of affiliation per respondent. Showing responses this way provides insight initial desires upon being associated with the neighborhood, and then how those desires may change after additional years.



There is an interesting jump between the perceptions of those affiliated for 3-5 years compared to those affiliated for 6-10 years. This change is not true for those affiliated for 16+ years.

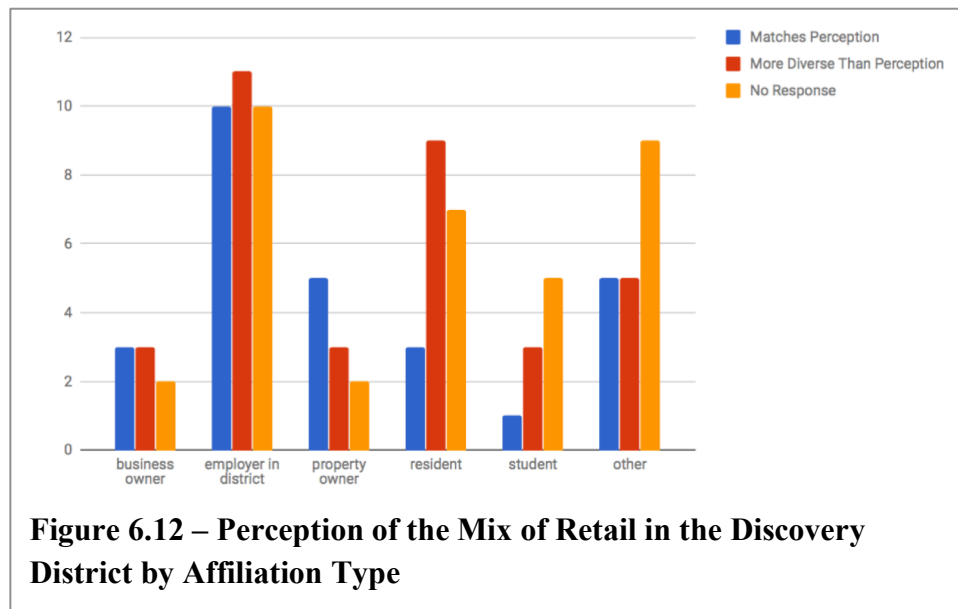


It is important to note that perceptions were misaligned both for more businesses than perceived and fewer businesses than perceived. Both perceptions can cause a change in desired businesses.

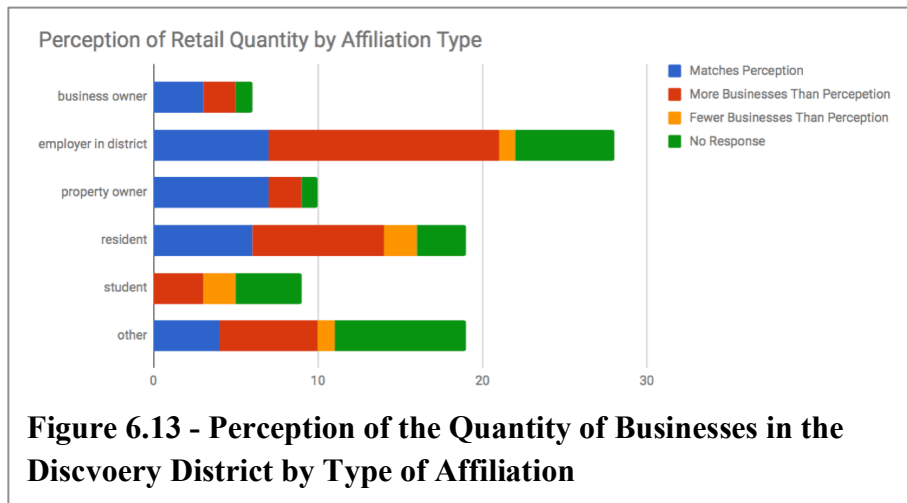
## Responses by Type of Affiliation

	Type of Affiliation					
	Business Owner	Employer in District	Property Owner	Resident	Student	Other
Average Age	36	38	47	38	28	51
White	6	23	6	12	5	10
Asian	0	0	1	1	0	0
Latino	0	0	0	1	0	0
Black	0	1	0	0	0	1
N/R	1	8	2	5	5	8
Responses	7	32	9	19	10	19

**Table 6.11 - Responder Demographics by Type of Affiliation with the Discovery District**

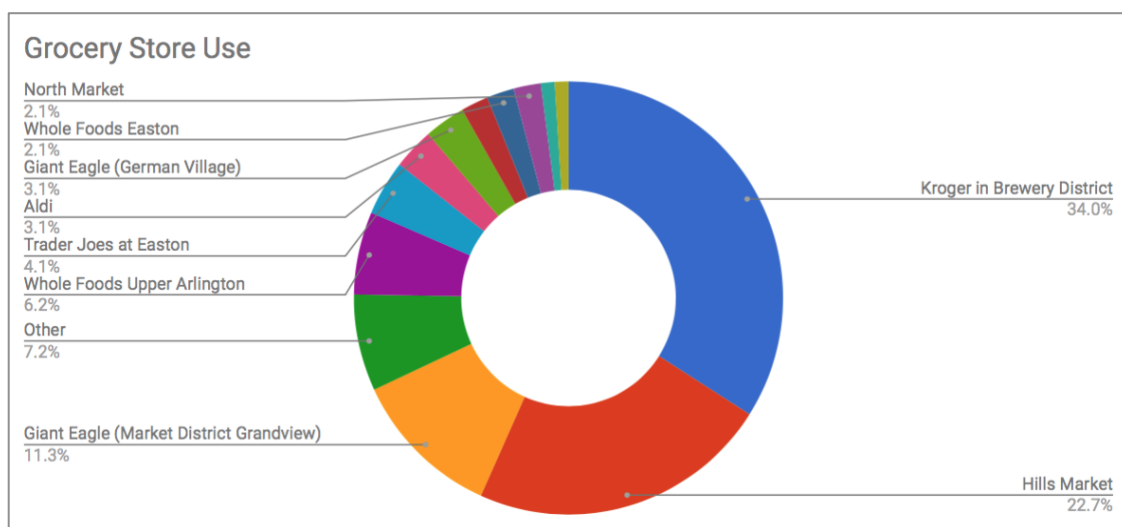


Perceptions were the most equally aligned and misaligned in business owners and those who's employers worked in the district. Perceptions were most misaligned for those who were property owners or students.



Perceptions of retail quantities however was misaligned for those who's employer is in the District and students. Not a single student responder felt their perception of the Discovery District retail mix matched their personal perception.

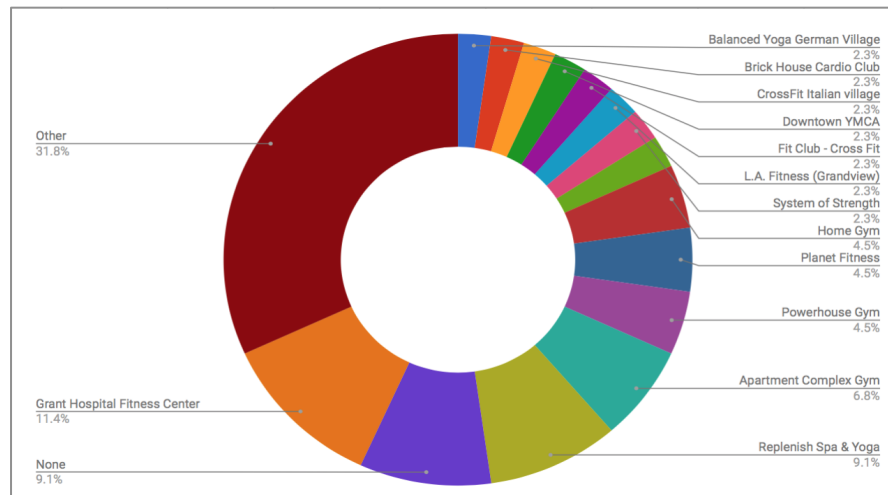
### B. Maslow's Hierarchy of Needs Compared to Overall Business Use



**Figure 6.14 – Grocery Store (Level 1) Use by those Affiliated with the Discovery District**

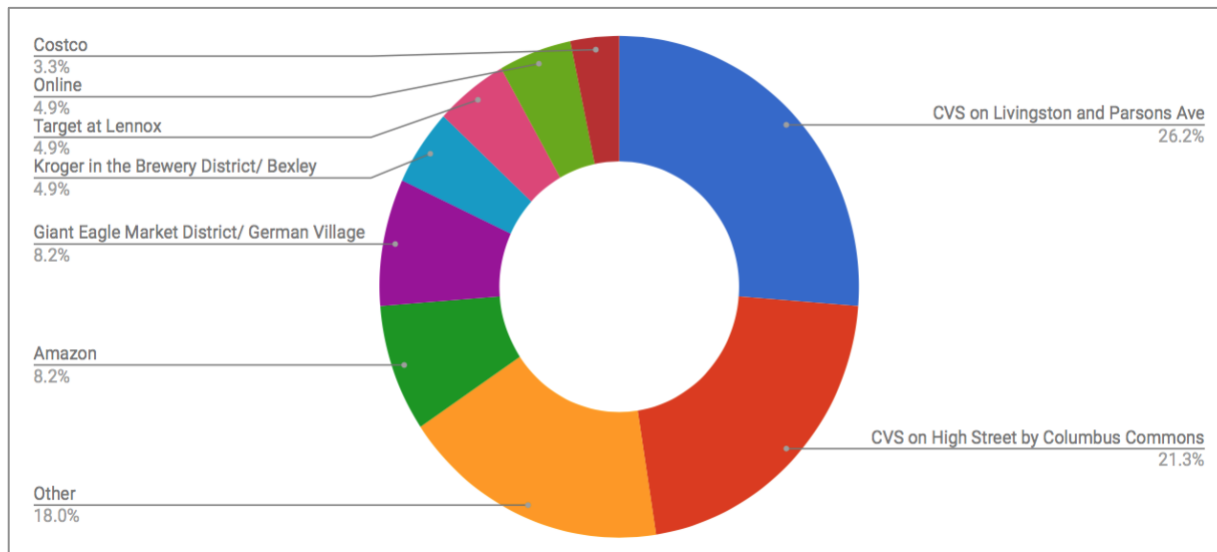
Grocery Store use was primarily done in proximate locations to the Discovery District. While Hills Market is the second highest use (showing support for a grocer downtown) – a full service grocer like Kroger was still the most dominant use. There is also a focus on healthy options with

preferences in grocers like Whole Foods or Trader Joes, which some responders will willing to drive to Easton to buy.



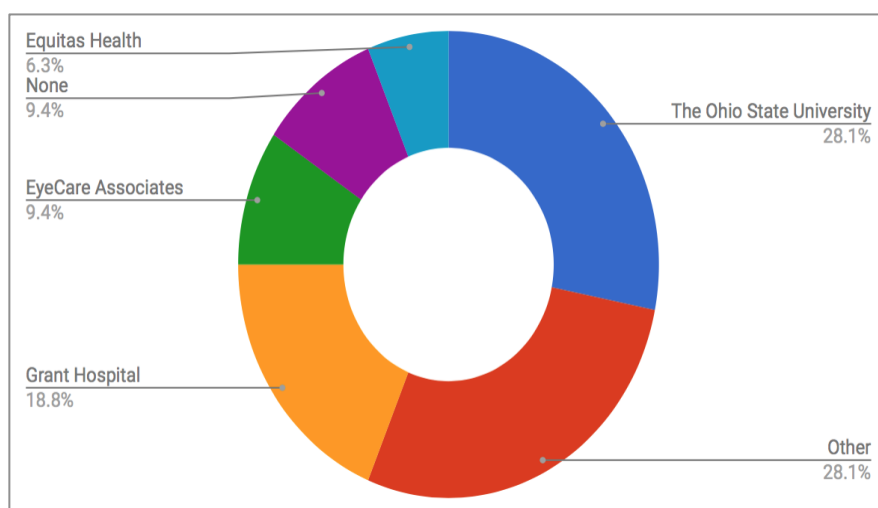
**Figure 6.15 – Fitness Facility (Level 1) Use by those Affiliated with the Discovery District**

Fitness Centers had wider variety than an of the other Level 1 businesses in the category. However, there is still a prevalence in the gyms proximate to the Discovery District, with Grant Hospital, Replenish Spa & Yoga. It would be interesting to dissect the “other” category to see how maybe responders may just exercise outside.



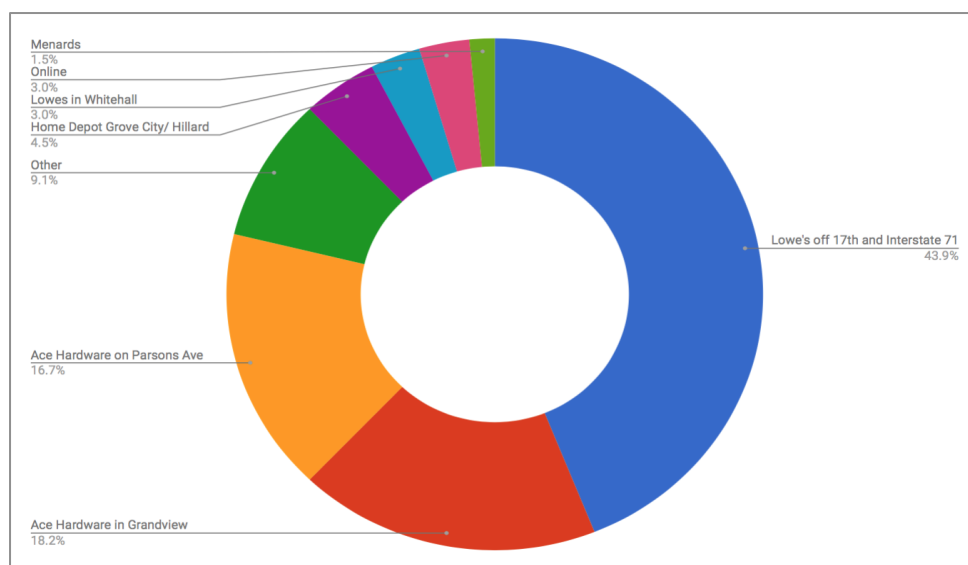
**Figure 6.16 – Hygiene, Pharmacy, and General Product Store (Level 2) Use by those Affiliated with the Discovery District**

The above mix for locations used to buy basic hygiene/ general products shows that 77% of responders marked 1 location for obtaining these products. Then, the remaining 12 out 52 used 2 or 3 locations for hygiene products. 47.5% of responders use the CVS stores located less than 0.5 miles from the Discovery District boundaries. The two most common results show loyal brand recognition and preference in those store's proximity to the Discovery District.



### Figure 6.17 – Healthcare Provider (Level 2) Use by Those Affiliated with the Discovery District

The above results show the responses of 32 out of 70 responders that answered their healthcare provider. At the time this survey was designed, only the physical health care providers were asked, counseling services within the district were not asked. Only businesses that were on. In the future, it would be interesting survey Discovery District responders if they use the counseling services relating to Level 3 of the hierarchy within the district.

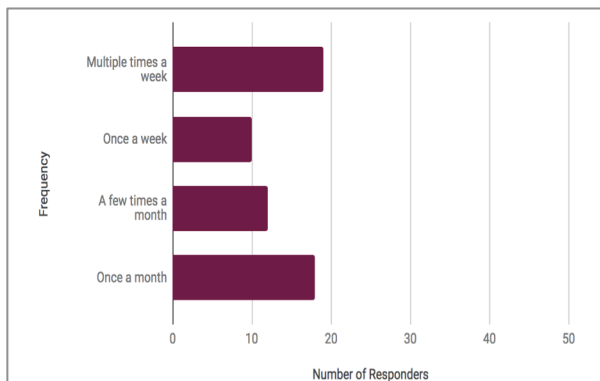


**Figure 6.18 – Hardware Store (Level 2) Use by Those Affiliated with the Discovery District**

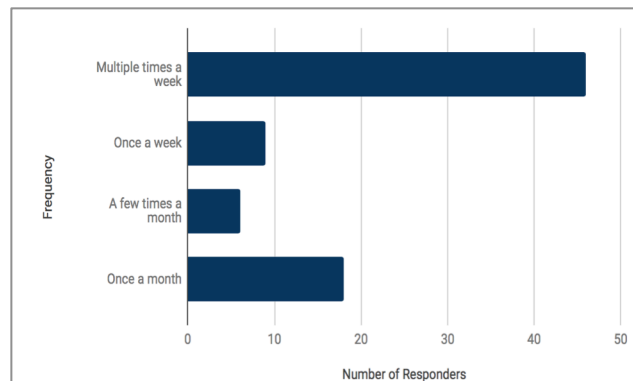
These responses follow the national trend for hardware stores- that consumers are more willing to drive to larger box stores. However, hardware stores just have to pay closer attention to the geographic location of competitors than other business types. 34.9% of responders used small scale Ace Hardware stores on Parsons Avenue and in Grandview, so there is reason to believe there is a market for small scale hardware for the Discovery District. Additionally, 12 out of 53 responses indicated using 2 or 3 stores for obtaining hardware supplies.



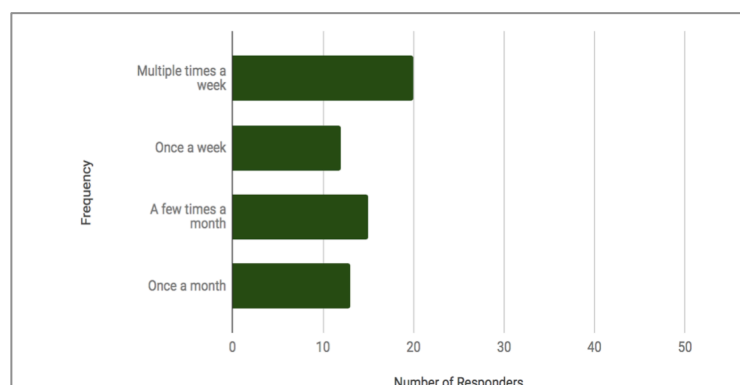
To gain insight to the mobility of those affiliated with the Discovery District, survey responders were asked how frequently they purchase goods in three different settings: in the Discovery District, in other Columbus neighborhoods, and online. As seen in the tables below most responders purchased goods multiple times a week in all three settings. However, the largest consensus is that goods were most often self reported as being bought in other Columbus neighborhoods. When comparing these graphs to the specific use category graphs above, like grocery store and fitness center use, these graphs match the self reported use of stores. However, an interesting note - the businesses within the Discovery District were the second most used. So while current self reported use shows that responders most often buy goods outside of the Discovery District, it would be interesting to compare these results across time as more businesses have been added to the Discovery District.



**Figure 6.19 – Frequency of Goods Purchased in the Discovery District**



**Figure 6.20 – Frequency of Goods Purchased in Other Columbus Neighborhoods**



**Figure 6.21 – Frequency of Goods Purchased Online**

To answer the cry of mobility and delivery: what is the point of having any store, anywhere? While bringing up the question of mobility is valid, from the responses from the study of where people in the Discovery District shop, a far larger amount still shop in person compared to online. “Despite slumping returns from national chains like Macy’s, Kohl’s, and Nordstrom, physical stores still command the bulk of the retail dollar. Only 7.5% of retail sales in the first quarter [of 2014] were from e-commerce, according to the U.S. Census Bureau” (Landau, 2014). Also, for needs like hygiene products and gyms, most responders used the facilities closest to them.

## **VII. RECOMMENDATIONS BASED ON RESULTS: PROPOSED TOOLS FOR BUSINESS SITE SELECTION AND RETENTION:**

### **A. Perception Data**

The thought to integrate perception data into city data profiles initially stemmed from the perception data’s use in public schools system. Perception data has been imperative to the public and private school system since the 1960s (PDK Poll, 2017). Perception data describes “people’s knowledge, attitudes, beliefs, feelings on their capacities”, etc. It answers the question, “What do people think they know, believe, or can do?” (ASCA, 2012). The Gallup Organization conducts “national random sample surveys of parents with children in both public and private schools”. These surveys serve as “useful national benchmarks about parent satisfaction with the schools” (PDK Poll, 2017). The survey asks their perceptions on topics ranging from programs offered to infrastructure improvements (Michigan Department of Education, n.d). It helps Michigan school administrators “make informed decisions about students and the learning environment, measure stakeholders’ perceptions of the learning community (Michigan Department of Education, n.d).

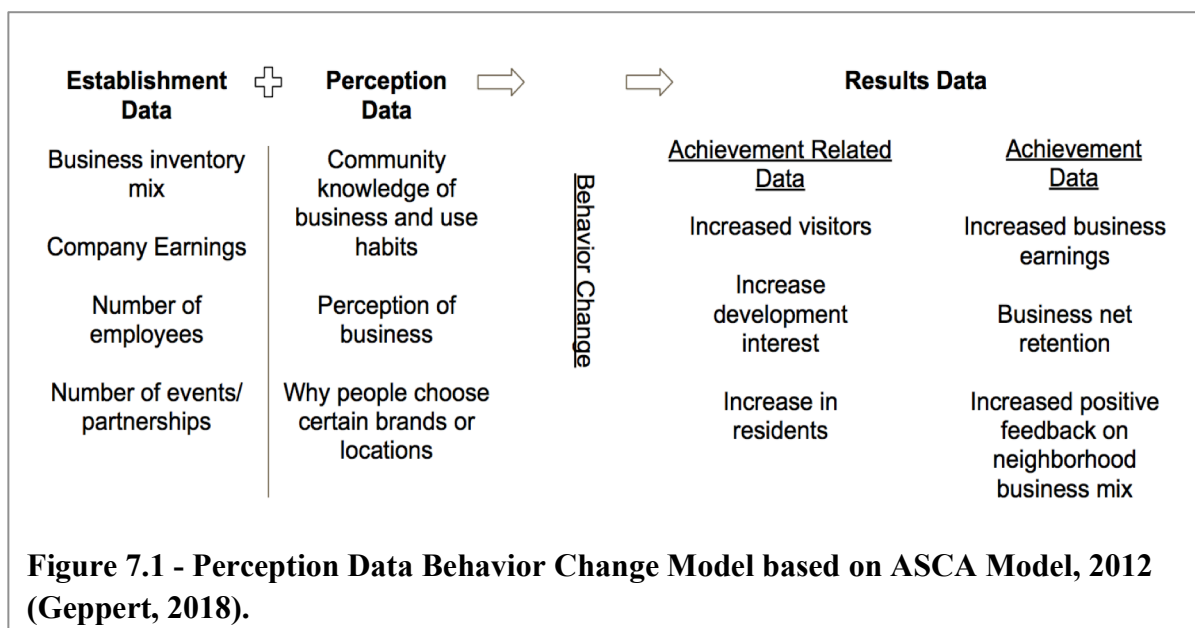
School administrators can also measure its self-perception against the community’s image of the school, and therefore, identify program effectiveness” (Michigan Department of Education, n.d).

The data profile includes “student, staff, parent, and community” perception data.

Perception data should be a part of the strategic planning process, improvement plan, and used to effect changes in the environment. In order to accomplish this, a “Culture/Climate Committee” can focus on managing perceptions, their roots, and reflective thinking about the conclusions.

The committee can take in different surveys from each group to tailor the survey questions. Once results are analyzed, the committee can seek stakeholder input for possible solutions for closing the gap between self-perception and community image. Then together, the stakeholders and committee can develop an action plan to address issues shown by perception data. (Michigan Department of Education, n.d).

The below behavior change model was adapted from the school model to be adapted to cities to show how establishment data knowledge is not enough to cause behavior change.



While there is limited research on collecting perception data for cities or neighborhoods specifically, how it changes behavior and desires in cities, is an increasingly frequent subject of research within the City and Regional Planning field. The perception data needs to be factored into current business site selection practices in order to increase probability of success.

Perception data might be able to find answer that traditional market analysis methods cannot pull from demographic spending habits alone. Not only could perception be one missing link in understanding why neighbors might be unsatisfied with their retail mix; but perception data could also provide insight into consumer thoughts and beliefs to understanding their behavior. Perception data could increase business retention, providing insight to possibly overlooked barriers for business success. If various restaurants have failed in the same retail space 4 times, perception data could provide insight as to why restaurants have not been successful in that space. Perhaps the community perceives one restaurant type as over-saturated (i.e. fast food) and a different type of cuisine or affordability level would meet the community's needs, but no one has asked. Planners are starting to ask in other fields though, and they are seeing a correlation.

In fact, a thesis published on *PLOS ONE*, *The Collaborative Image of The City: Mapping the Inequality of Urban Perception* states "Until now, however, our ability to understand the effect of a city's built environment on social and economic outcomes has been limited by the lack of quantitative data on urban perception." (Salesses, 2013). This thesis dives into the perceptions of cities as a whole and its effect on the economy- think top vacation spots, or cities that get selected for the Olympics. Quantifying perception is starting to make "the auroa" of a city less mysterious, and the feelings about what people like (or don't like) can be understood.

Quantifying perception is gaining wider validity and their correlation to quality of life may be getting more common. In Europe, "a series of surveys was conducted to measure the

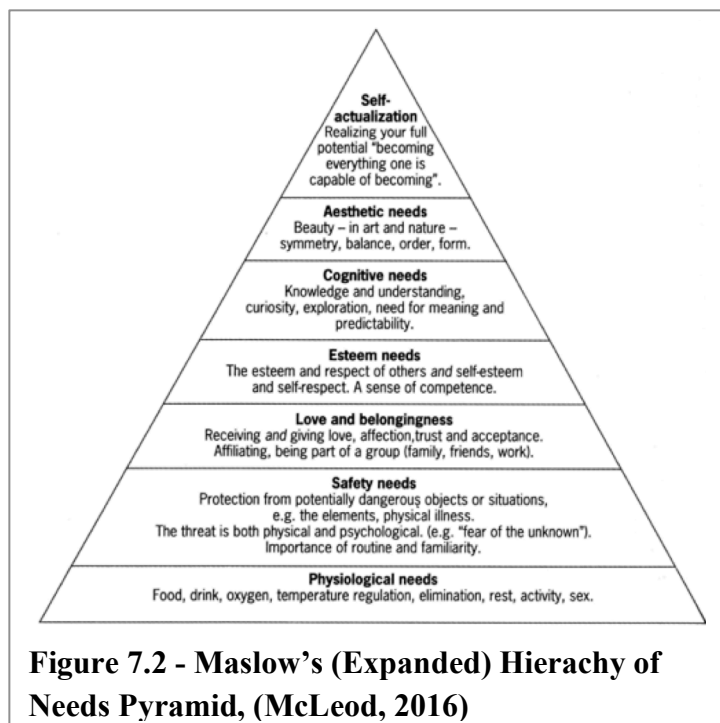
local perceptions of quality of life in selected cities” (European Commission, 2007). The European Commission recognized that the citizen experience and their perception of their community was important to how the citizens used their community and how they felt about the community met their needs. The abstract of the MIT thesis *Deep Learning the City: Quantifying Urban Perception At A Global Scale* used computer vision methods to quantify the perception of urban environment. The thesis explored the increasing use of studying the “relationship between a city’s physical appearance and the behavior and health of its residents.”(Dubey, 2016). There is increasing merit to understanding perception and its beneficial place in the field.

From research and the survey results, perception data could be useful in neighborhood small retail mix. First, this is a tool to communicate back to the neighborhood. If perception is misaligned, the data can be shown to neighborhoods as a neighborhood consensus, instead of just anecdotal desires. Once talk about perception becomes specific, measurable, and transferable, direct changes can be addressed. Without perception data, the feelings of the neighborhood are limited to generalizations. Secondly, if the perception is based on design – like a façade is uninviting, or they have trouble finding a restaurant in a mixed used building – these precise perceptions can be communicated back to the business owner. If the business owner receives specific feedback, they will better be able to meet customer needs and the customer does not have to address a business individually.

## **B. Maslow’s Hierarchy of Needs and Business Site Selection**

When looking to perception to answer why a business may not be meeting the need of a resident, it is a natural desire to define what a “need” is. Community members can be left unsatisfied with the retail mix in their community. Meeting “needs” is central to business. (Hill,

2017). Understanding what “needs” are being met in a community provides may also be able to provide insight to recurring results in quality of life indicators. Maslow’s (1943) theory on Hierarchy of Needs has been cited and adapted within several fields- finance, hospitality, and healthcare to name a few- see the appendix for additional adaptations. The Figure 7.2 below is an expanded version of Maslow’s Hierarchy of Needs. The addition of cognitive and aesthetic needs was included as one progresses towards self-actualization. The expanded version is used in this context because it allows more clarity when assigning levels to business.



Basing business site selection off of Maslow’s Hierarchy, again, was used because each level has its own all that which have their own frequency and demand. The hierarchy is used to show that people cannot get to higher levels if the bottom levels are not first met. This can create significant societal issues when relating this to business and service access.

Below is a table designed when exploring the possibility of assigning business services to “need categories”. While food and hardware stores are easier to assign to a Maslow level, some businesses or entities like libraries, churches, or even gyms might be considered places that represent the ability to self actualize. Also, businesses may also meet several needs. Some businesses may meet more than one need through their business model. For example, a restaurant

primarily meets the level 1, “food, water” category, but to a waiter the establishment is his or her place of work so therefore it also satisfies the level 2, “security and safety” category for employment as well. If he or she likes his co-workers, this restaurant could also meet level 3, “love and belonging” or, if a person is a chef at this restaurant, and his identity comes from this restaurant, then level 7 “self-actualization”, could be met.

For the purpose of this thesis, the most basic level is assign to the primary function of the business. If given more time, I would develop a more complex matrix to allow businesses to meet multiple needs. Also, it would be interesting to allow feedback about the needs the businesses meet (or not) from the community’s perspective. If a business is not well visited or not well kept up, it could be a cause for feeling unsafe and unsatisfied.

One change to note is in the healthcare category. Healthcare as a business type was added together for the purpose of the retail mix because physical health and mental health are both in the industry. However, for the purpose of Maslow’s Hierarchy of Needs, physical health is classified as a Level 2 need according to the pyramid. Mental health and counseling centers are classified in the Level 3 “self esteem” category to satisfy the mental barriers to better health, rather than say a broken leg. Otherwise, all categories still use the North American Industry Classification System (2017).

<b><u>Business Type</u></b>	<b><u>Quantity</u></b>	<b><u>Maslow Type</u></b>	<b><u>Level on Pyramid</u></b>
Healthcare	9	Safety and Security	2
Restaurants/ Cafés	16	Physiological	1
Arts, Music & Dance	15	Aesthetic	6
Schools & Universities	12	Cognitive	5
Religious	9	Belongingness	3

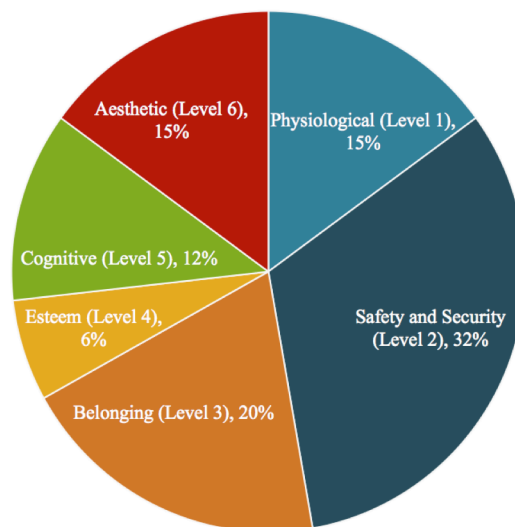
Publishing	9	Belongingness	3
Government Entities	8	Safety and Security	2
Car/ Auto Related	6	Safety and Security	2
Construction/ Design Firms	6	Safety and Security	2
Gyms	5	Physiological	1
Bars	4	Belongingness	3
Library/ Bookstore	3	Cognitive	5
Salons	3	Aesthetic	6
Parks	2	Physiological	1
Insurance Company	2	Safety and Security	2
Clothing Shops	2	Physiological	1
Banking	2	Safety and Security	2
Pet Care	2	Belongingness	3
Jewelry Shop	1	Aesthetic	6
Hotel	1	Physiological	1
Law Firm	1	Safety and Security	2
Counseling Center	8	Esteem Needs	4
Adoption Center	1	Love and belonging	3

<u>Maslow Type</u>	<u>Quantity of Businesses</u>	<u>Quantity the Category is Assigned to a Business Type in District</u>
Self Actualization	0	0
Aesthetic	19	3
Cognitive	15	2



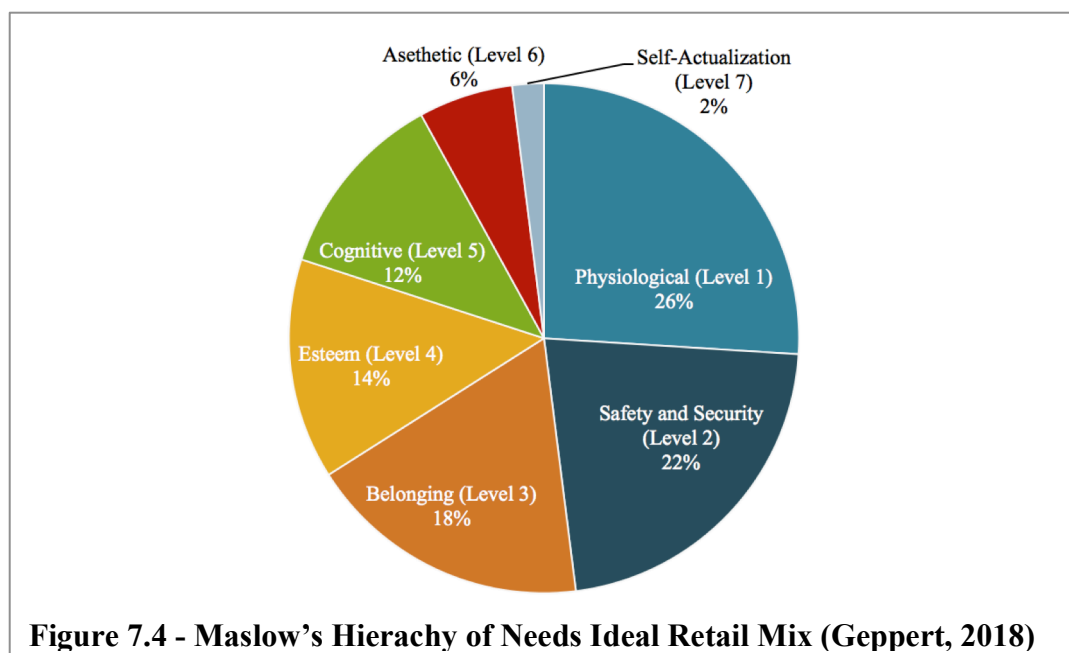
Esteem	1	1
Belonging	25	5
Safety and Security	41	7
Physiological	26	5

Based on Maslow's pyramid, one would expect an ideal ratio of 13:11:9:7:5:3:1, or 26.5%, 22.4%, 18.4%, 14.3%, 10%, 6.1%, 2.0%, of business associated to a Maslow Hierarchy of Needs to each respective level. The lower levels on the hierarchy are tangible products, and these business needs are needed with more frequency, than the intangible aspirations of the top levels. One could construct a mix to measure how well an area was addressing community needs by subtracting the actual percentage from the ideal percentage for each level. A lack of present businesses meeting one stage may be cause for a spike of businesses in another (i.e. no fresh food, needing more medical services).

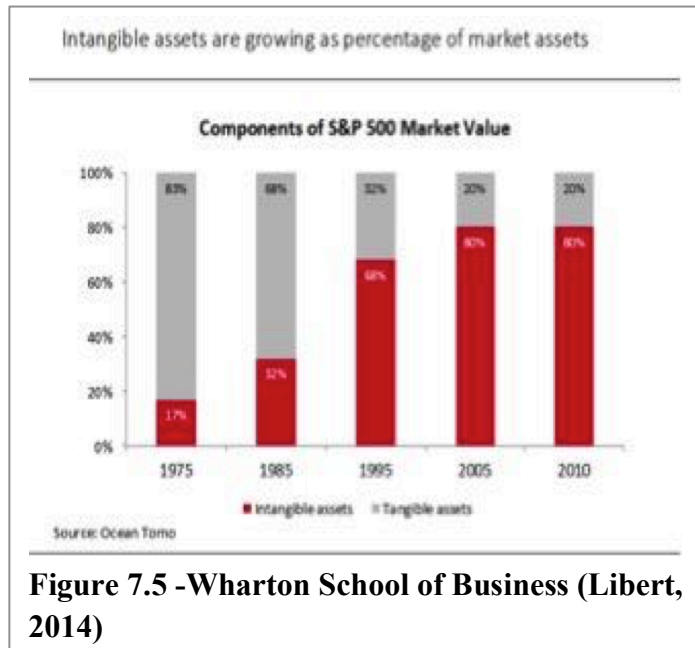


**Figure 7.3 – Quantity of Businesses Categorized by Maslow's Hierarchy of Needs Level in the Discovery District, Columbus, Ohio (Geppert, 2018)**

Figure 7.3 shows the Discovery District's current retail mix according to Maslow's Hierarchy of Needs. This figure shows a direct correlation to the survey responders' most in demand business type: restaurants, cafes, and groceries- a Level 1 need. People need more frequency of Level 1 before people feel satisfied to move on to higher level of need business types. The graph shows that about 75% of the businesses are matched with the first three levels on Maslow's Hierarchy of Needs. This correlates to the ideal retail mix represented below in Figure 7.4.



While this mix maybe be the first to be applied to a neighborhood retail mix, this rational is not the first of its kind. In 2014, a researcher with the Wharton School of Business at the University of Pennsylvania looked into business services and the “needs category” they correlate to (Libert, 2014). Before 1970, 85% of businesses provided the first two tiers of needs- (food, water, and shelter to safety, security, health, and employment). However, since 2010, the results have flipped and now 85% of businesses provided all other categories above the first two (love and connection, self esteem and expression, etc). This research aims to understand what



businesses are meeting which “needs” within the district- and what about the present business mix correlates to needs met. Also, it aims to understand what “needs” citizens have to meet outside of the district. (Libert, 2014).

Unfortunately, the source, Ocean Tomo did not provide guidelines to how they assigned businesses to a needs category, so again, the businesses were assigned

levels based on best judgement of the primary product or purpose of the business.

To scale across time and other neighborhoods, “the Herfindahl–Hirschman Index (HHI) could be used. The U.S Department of Justice uses this scale in antitrust cases to measure market competitiveness and market concentration (U.S Department of Justice, Antitrust Cases, n.d). The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ( $30^2 + 30^2 + 20^2 + 20^2 = 2,600$ ). A theoretical example of the HHI index being used for Maslow’s Hierachy of Needs is below as Figure 8.5.

Level	Proportion	Percentage	Ideal Share	Actual #	Actual Share	Scale	Perfect Alignment	Perfect Mis-alignment
1	13	26.5%	0.265	26	0.205	0.004	0.265	0.000
2	11	22.4%	0.224	41	0.323	0.010	0.224	0.000
3	9	18.4%	0.184	25	0.197	0.000	0.184	0.000
4	7	14.3%	0.143	1	0.008	0.018	0.143	0.000
5	5	10.2%	0.102	15	0.118	0.000	0.102	0.000
6	3	6.1%	0.061	19	0.150	0.008	0.061	0.000
7	1	2.0%	0.020	0	0.000	0.000	0.020	0.000
Sum		100.0%	1.000	127	1.000	0.040	1.000	0.000
Normalized						350	0	10000
					(the sum must be 1.0)		(the sum must be 1.0)	(the sum must be 1.0)

(Perfect need alignment has a value of 0; perfect misalignment has a value 2.0)

**Figure 7.6 – HHI Theoretical Application to Maslow's Hierarchy of Needs Retail Mix**

## **VIII. CONCLUSION**

A better neighborhood small business site selection decision-making framework can be developed by adding insight from community perception and needs analysis based on Maslow's Hierarchy of Needs. Those seeking to add value to a neighborhood through small business development can use these tools to be more intentional about the site selection. From the results, it can be concluded that the benefits of utilizing these tools could result in improve community perception and improved retail mix satisfaction if communicated to the community and those interested in business additions within the Discovery District.

Additional use for these tools have a far greater influence beyond an ideal retail mix. An identity can be associated within people based on the perception of their neighborhood and the types of businesses in it. This can affect a person's perception about their own capabilities. While mobility is more accessible than ever with innovations like Uber and delivery services, neighborhood small business site selection clearly still has its place in meeting community needs. The exposure to business types and the perception of a business presence affects community desires and satisfaction. The perception of these small businesses just needs to be addressed and heard in order for business satisfaction to improve.

Once perception and community needs are understood through retail mix, community members may be more interested to explore the area. Individuals may be introduced to new businesses they were not even aware were in the area. A greater consensus on desired business additions could also emerge if communication through these tools are increased. Community members may be more inclined to think about the neighborhood retail mix and how they

perceive it. They may also change shopping patterns from an increased awareness about what businesses provide their needs in the district- and when they use businesses elsewhere.

If communication and knowledge in the community is strong, the community may be more likely to support local businesses or services and the perception that the community groups are trying to meet their needs could increase. Community health, crime, or education statistics may have a correlation to neighborhood retail mix. This again, could be compared across neighborhoods and throughout time by using the HHI index. If these tools are implemented, change in the quality of life indicators from perception changes and retail mix changes could provide valuable insight to neighborhood health. City officials, planners, and stakeholders involved with the business site selection process now have tools to be aware of the retail mix in neighborhoods and how this affects a community's quality of life. If these tools are applied, the city officials' perception and vision of business developments should be more closely aligned with the expectations of the citizen needs and desires.

The conclusions drawn in this thesis show that perceptions differed in about half of the population of the survey responders from the Discovery District. Presenting the retail mix did change preferences in desired business infill. As a follow up, it would be interesting to research if presenting citizen's desires to developers and city officials change their business selection decision frameworks. Would this data does influence change in the Discovery District, and what entities find the data useful?

Additionally, there was a clear correlation about the business types desired and the Discovery District retail mix compared to the ideal retail mix developed from Maslow's Hierachy of Needs. Eight out of the nine suggestions focused on Maslow Level 1 and 2 needs, of which are used at a higher frequency than the higher levels. If the Discovery District wants to

attract more residents and retain more business types, the found results should make great improvements to community satisfaction of the retail mix. As far as applying the tools, additional insights to communication preferences may be necessary to understand as well. How does information change, or not, how people think about a place? If the current downtown website, app, or e-mail methods are not working- what other platforms would responders like to get their information from?

Both tools are necessary inclusions to improve business retention and community satisfaction. If only perception is measured, the retail mix will not be understood in a greater context. If only a retail mix ideal is understood, perception could still be a barrier to business success. The tools are to be used in tandem and regularly. Data collected and monitored will provide the most insight to identify the dependent variables to better outcomes. This thesis answers preliminary insight, but in the future the survey could become far more specific and start address tangible change. Then, there could be the possibility to measure the impact on perception and the retail mix throughout the years. Then, there may be the ability know that a new tool to improve quality of life through small business neighborhood retail mix can be applied.

## **IX. APPENDIX**

### **A. Discovery District Perception Survey**

Thank you for your willingness to participate in the Discovery District Business Perception Survey. This survey can be stopped at any time if you no longer wish to participate.

This survey is being used for research in an Undergraduate Senior Thesis in The Ohio State University's City and Regional Planning Program through The Knowlton School. The survey aims to understand business perception and meeting community needs.

Participation is voluntary. Participants may withdraw at any time without penalty or loss of benefits. Your responses will be kept confidential to The Ohio State University researchers involved in this study. Only results of analyzed trends will be published- never individual responses. We will work to make sure that no one sees your survey responses without approval.

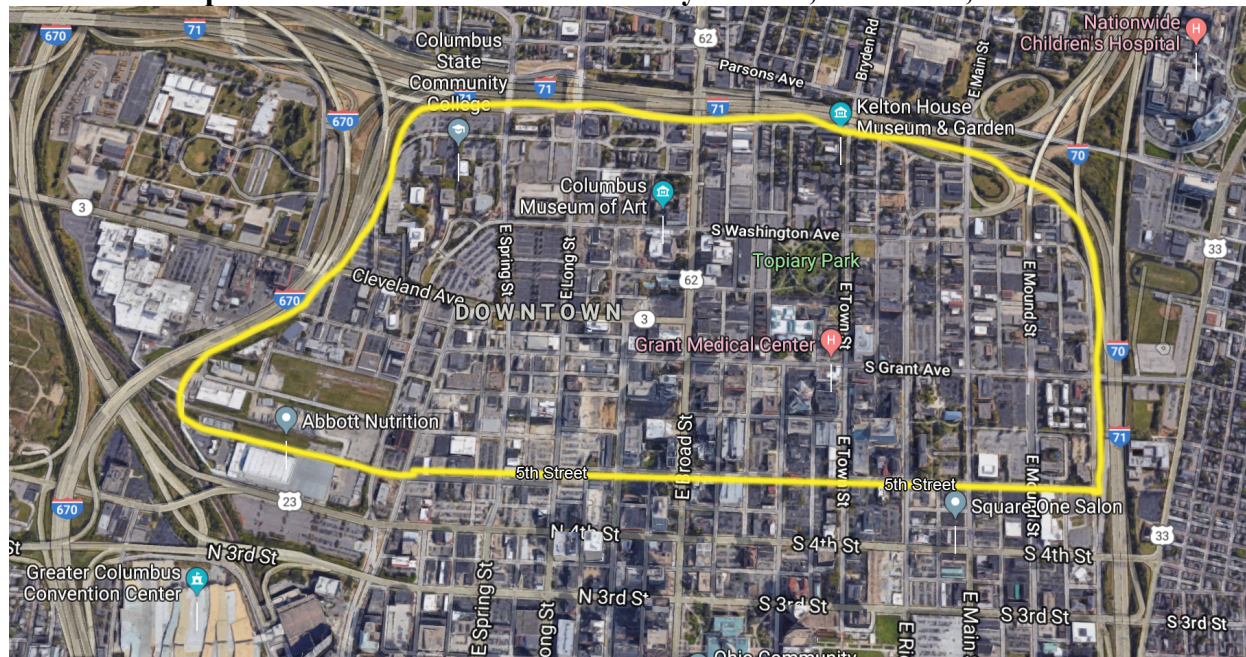
But, being as this survey uses the Internet, there is a chance that someone could access your online responses without permission. In some cases, your responses may provide some identifiable information in the event of access without permission.

Responders have about a 1 in 50 chance to win a \$10 gift card to a Discovery District location of their choosing. All participants will be entered into the drawing for a gift card. All gift cards will be mailed to their recipients by May 1st, 2018 and all winners will be notified by April 30th, 2018. If you win, you will be emailed and asked for an address to send the gift card to. Please contact lead researcher, Margo Geppert at [geppert.4@osu.edu](mailto:geppert.4@osu.edu) for questions, concerns, or complaints about the survey. Contact Sandra Meadows with The Ohio State University Office of Responsible Research Practices (ORRP) at 1-800-678-6251 for information and questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not a part of the research team.

**If you give consent to taking this survey please check "I agree" below.**

- ☐ I agree
- ☐ I do not give consent

**Below is a map of the boundaries of the Discovery District, Columbus, Ohio.**



**Q1 of 21 Affiliation with the District (check all that apply):**

- ☐ Resident
- ☐ Property Owner
- ☐ Residential Tenant
- ☐ Business Owner
- ☐ Student

☐Employer is Within the District

☐Other \_\_\_\_\_

**Q2 of 23 How long have you been affiliated with the Discovery District?**

☐0-2 years

☐3-5 years

☐6-10 years

☐11-15 years

☐16+ years

**Q3 of 23 If you live in the Discovery District, is your employer also in the Discovery District? (If no, write which neighborhood your employer is in)**

☐Yes

☐No \_\_\_\_\_

**Q4 of 23 Where do you get your groceries? (List location/ neighborhood, can be more than one store)**

☐Hills Market

☐Kroger in the Brewery District

☐Giant Eagle Market District in Grandview

☐Kroger on Parsons Ave

☐Whole Foods in Upper Arlington

☐Other \_\_\_\_\_

**Q5 of 23 Which restaurants/ cafes have you eaten at?**

☐Donato's Pizza

☐McDonald's

☐Cafe Illyria

☐Subway

☐Brioso Roastery & Coffee Bar

☐Domino's Pizza

☐Roosevelt Coffeehouse

☐Sandman Express Downtown

☐Soluna Cafe Bakery



- ☐ Indian Oven
- ☐ Schokko Cafe Columbus Museum of Art
- ☐ Jimmy John's
- ☐ Famous Chicken
- ☐ Oodles Noodle & Dumpling Bar
- ☐ Carnage Cafe Columbus Metropolitan Library
- ☐ Other \_\_\_\_\_

**Q6 of 23 Where do you get your hygiene products? (toothbrush, shampoo, etc.) (List location/ neighborhood, can be more than one store)**

- ☐ CVS on Livingston and Parsons Ave
- ☐ CVS on High Street by Columbus Commons
- ☐ Other \_\_\_\_\_

**Q7 of 23 Which fitness center do you work out in?**

- ☐ Replenish Spa & Yoga
- ☐ V Power Yoga
- ☐ 12th Round Crossfit
- ☐ Grant Hospital Fitness Center
- ☐ Beyond Limits Training
- ☐ Other \_\_\_\_\_

**Q8 of 23 Where do you get hardware or home repair supplies?**

- ☐ Lowe's off 17th and Interstate 71
- ☐ Ace Hardware in Grandview
- ☐ Ace Hardware on Parsons Ave
- ☐ Other \_\_\_\_\_

**Q9 of 23 Do you use any Healthcare services in the Discovery District? (Select all that apply)**

- ☐ Grant Hospital
- ☐ EyeCare Associates
- ☐ The Ohio State University
- ☐ Nationwide Children's Hospital
- ☐ Other \_\_\_\_\_

**Q10 of 23 Which cultural institutions do you visit?**

- ☐Columbus Museum of Art
- ☐Thurber House
- ☐Kelton House
- ☐BalletMet
- ☐Columbus Community Theatre
- ☐The Bluestone
- ☐Spoonful Records
- ☐The Lyle Gallery
- ☐Columbus Athenaeum
- ☐Other \_\_\_\_\_

**Q11 of 23 How often do you purchase goods within the Discovery District?**

- ☐Multiple times a week
- ☐Once a week
- ☐A few times a month
- ☐Once a month

**Q12 of 23 How often do you purchase goods outside of the Discovery District?**

- ☐Multiple times a week
- ☐Once a week
- ☐A few times a month
- ☐Once a month

**Q13 of 23 How often do you purchase goods online?**

- ☐Multiple times a week
- ☐Once a week
- ☐A few times a month
- ☐Once a month

**Q14 of 23 Rank from 1 to 8 (1 is most common businesses, 8 is least common businesses) for each business in the Discovery District**  
**(Each rank in a category should be in relation to the other categories, ex. if the Discovery District is mostly restaurants & bars, restaurants & bars should be "1")**

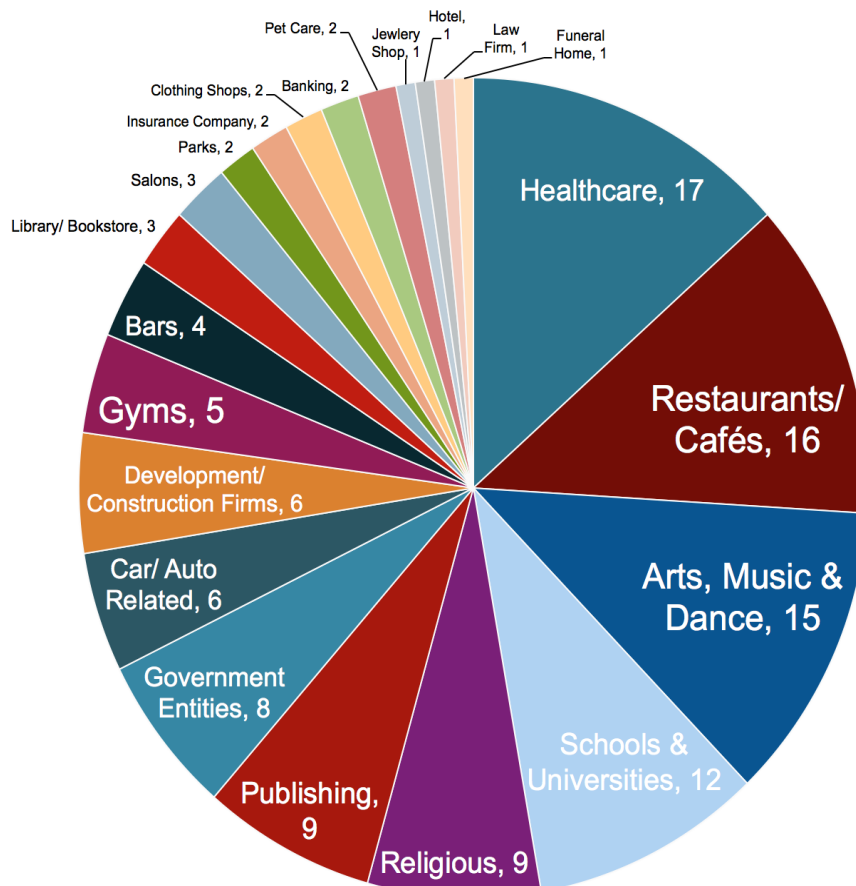
- \_\_\_\_\_ Cultural Institutions
- \_\_\_\_\_ Educational Institutions
- \_\_\_\_\_ Restaurants & Bars

- \_\_\_\_\_ Practical supplies (Hardware stores, laundromats, bank etc)
- \_\_\_\_\_ Green Space
- \_\_\_\_\_ Medical Services
- \_\_\_\_\_ Shopping & Retail
- \_\_\_\_\_ Beauty & Salons

**Q15 of 23 What additional amenities would you like to see in the Discovery District? (Please make at least one suggestion/ suggest as many as you like) (Examples: movie theater, clothing boutique, gym, etc)**

- ☐ Suggestion 1 \_\_\_\_\_
- ☐ Suggestion 2 \_\_\_\_\_
- ☐ Suggestion 3 \_\_\_\_\_
- ☐ Suggestion 4 \_\_\_\_\_
- ☐ Suggestion 5 \_\_\_\_\_
- ☐ Suggestion 6 \_\_\_\_\_

**Q16 of 23 Below is a graphic reflecting the 127 business in the District. The mix compared to the amounts in other categories in the Discovery District. Describe the reaction you have to the graph below.**



**Q16 of 23 This retail mix in this graph (click all that apply):**

- ☐Matches my perceptions of mix
- ☐More diverse than my perception
- ☐Which category did you think is more prevalent?

\_\_\_\_\_

- ☐Which category did you think is less prevalent?

\_\_\_\_\_

- ☐Additional Thoughts: \_\_\_\_\_

**Q17 of 23 The quantity of business in this pie chart and the District (check all that apply):**

- ☐More businesses than I thought overall
- ☐Few business than I thought overall
- ☐Matches my perception
- ☐Fewer of which type of business than I thought:

\_\_\_\_\_

- ☐More of which type of businesses than I thought:

\_\_\_\_\_

- ☐Matched quantity of my perception in which categories:

**Q18 of 23 Now that you have seen a business mix within the Discovery District- rank from 1 to 8 (1 is most common business, 8 is least common business) for each category you would LIKE TO SEE in the Discovery District.**

**(Each rank in a category should be in relation to the other categories, ex. if the Discovery District is mostly restaurants & bars, restaurants & bars should be "1")**

\_\_\_\_\_ Cultural Institutions  
\_\_\_\_\_ Educational Institutions  
\_\_\_\_\_ Restaurants & Bars  
\_\_\_\_\_ Practical supplies (Hardware stores, laundromats, bank etc)  
\_\_\_\_\_ Green Space  
\_\_\_\_\_ Medical Services  
\_\_\_\_\_ Shopping & Retail  
\_\_\_\_\_ Beauty & Salons

**Q19 of 23 What additional amenities would you like to see in the Discovery District?  
(Suggest as many as you like)(Examples: movie theatre, clothing boutique, gym, etc)**

- ☐Suggestion 1 \_\_\_\_\_
- ☐Suggestion 2 \_\_\_\_\_
- ☐Suggestion 3 \_\_\_\_\_

- ☐ Suggestion 4 \_\_\_\_\_
- ☐ Suggestion 5 \_\_\_\_\_
- ☐ Suggestion 6 \_\_\_\_\_

**Q20 of 23 E-mail address: (to contact if a selected gift card winner)**

\_\_\_\_\_

**Q21 of 23 What year were you born in? (ex. 1978, 1993, 1967)**

\_\_\_\_\_

**Q22 of 23 What is your race/ ethnicity? (Select all that apply)**

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White

**Q23 of 23 Nearest Intersection to Address you are affiliated with in the Discovery District (example: Grant & Broad St.):**  
**(This will not be shared with anyone, it is simply to gauge where responses are coming from in the Discovery District)**

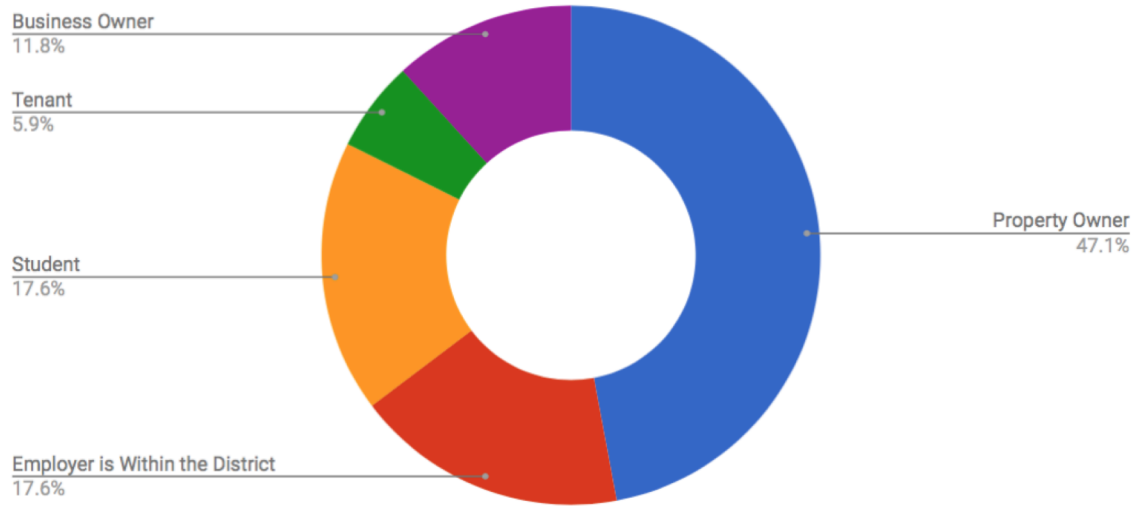
\_\_\_\_\_

Thank you for taking the Discovery District Business Survey! Your responses are greatly appreciated and provide valuable feedback.

If you won a gift card you will be notified by April 30th, 2018 by the e-mail [knowltondiscovery@gmail.com](mailto:knowltondiscovery@gmail.com).

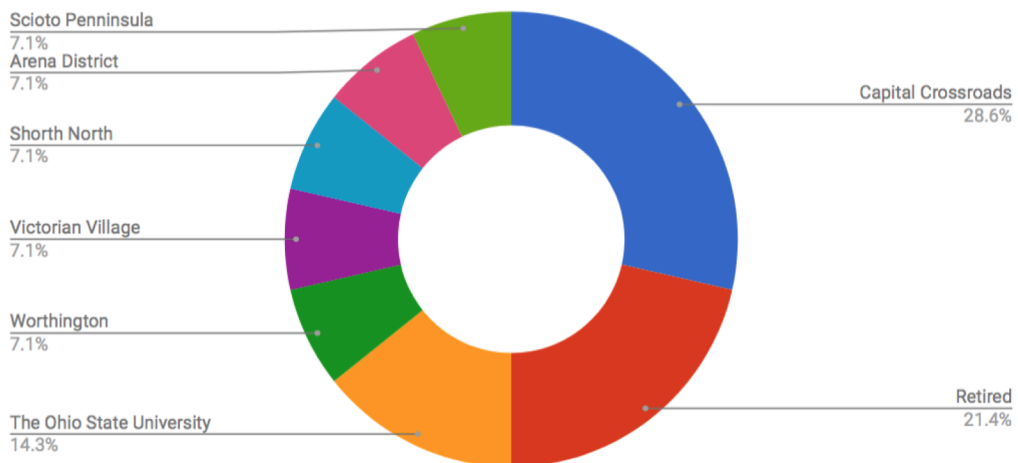


### Residents with Additional Affiliations



**Figure 9.2 – Residents with Additional Affiliations**

### Those Affiliated with the Discovery District, but Work Elsewhere Work In...



**Figure 9.3 - Workplaces of Discovery District Residents that are Outside of the Discovery Distirct**

Desired Additions in the Discovery District by Years of Affiliation



Figure 9.4 – Desired Additions By Business Owners

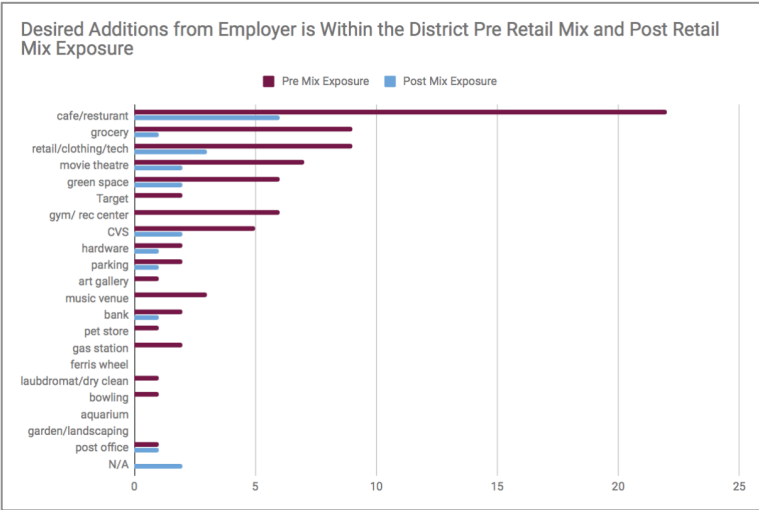
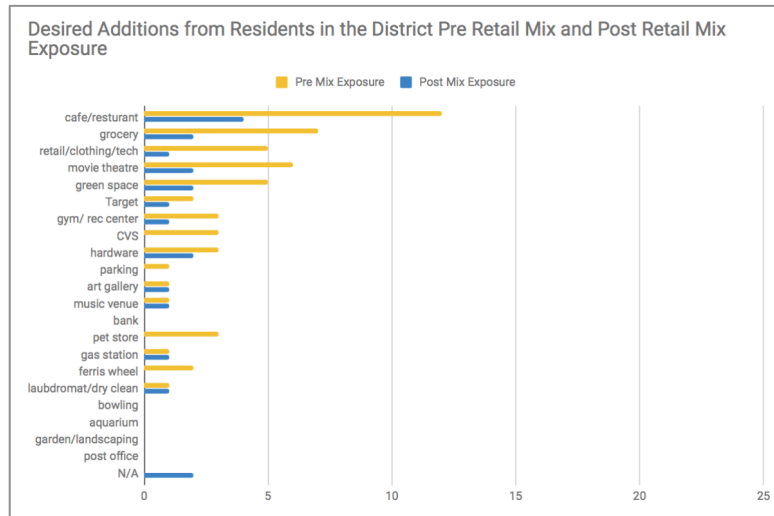


Figure 9.5 – Desired Additions those who their Employer is Within the District

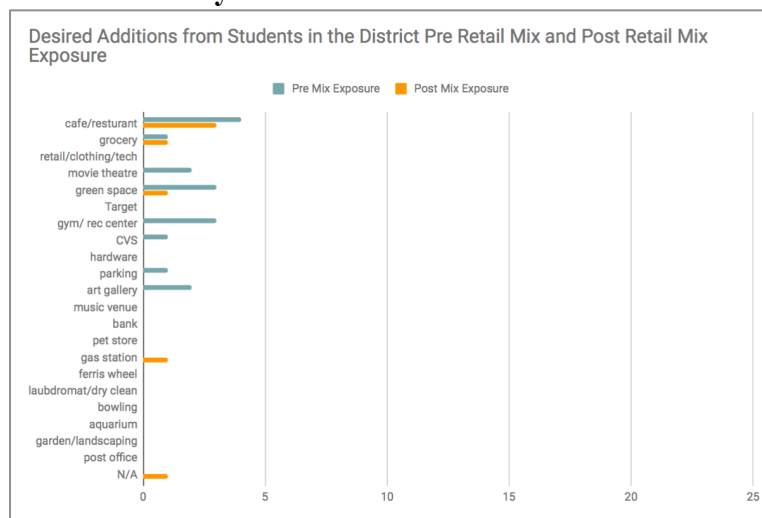


Figure 9.6 – Desired Additions By Property Owners

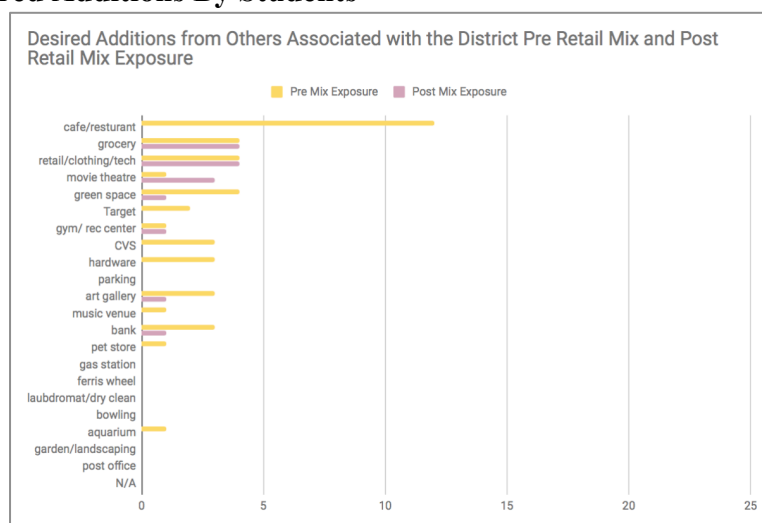




**Figure 9.7 – Desired Additions By Residents**



**Figure 9.8 – Desired Additions By Students**



**Figure 9.9 – Desired Additions By Other Affiliations**

## Desired Additions in the Discovery District by Years of Affiliation



Figure 9.10 – Desired Additions By 0-2 Years

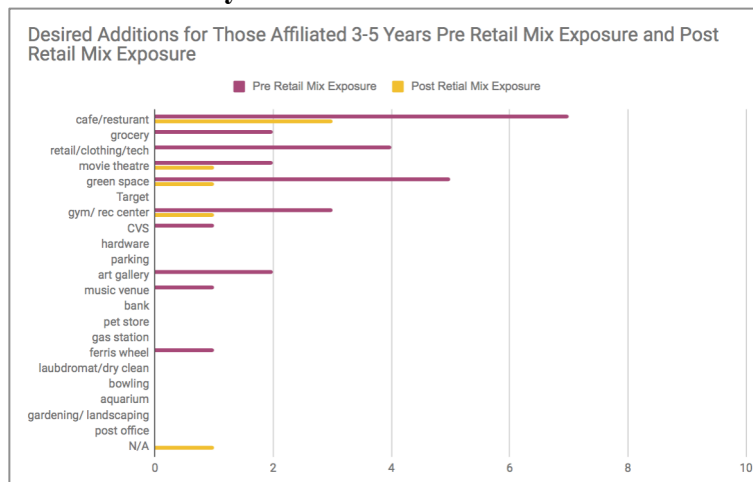


Figure 9.11 – Desired Additions By 3-5 Years

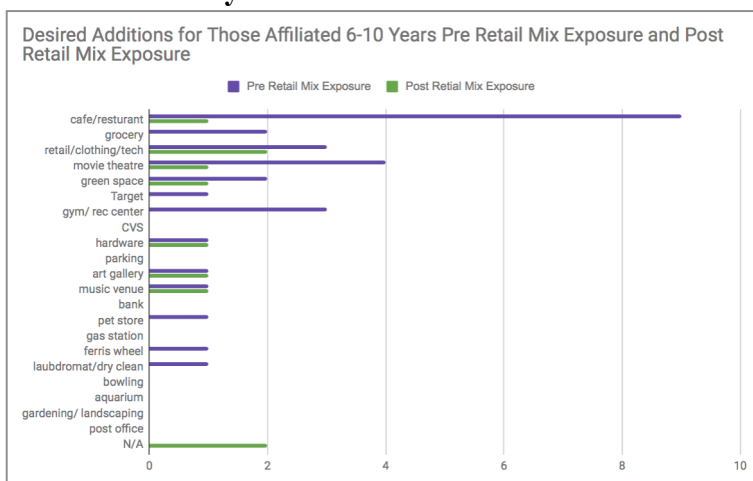
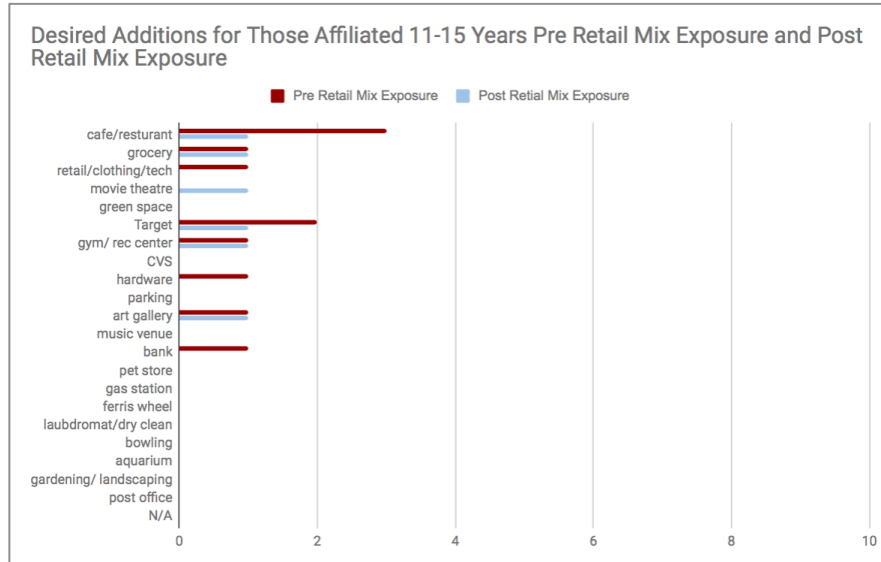
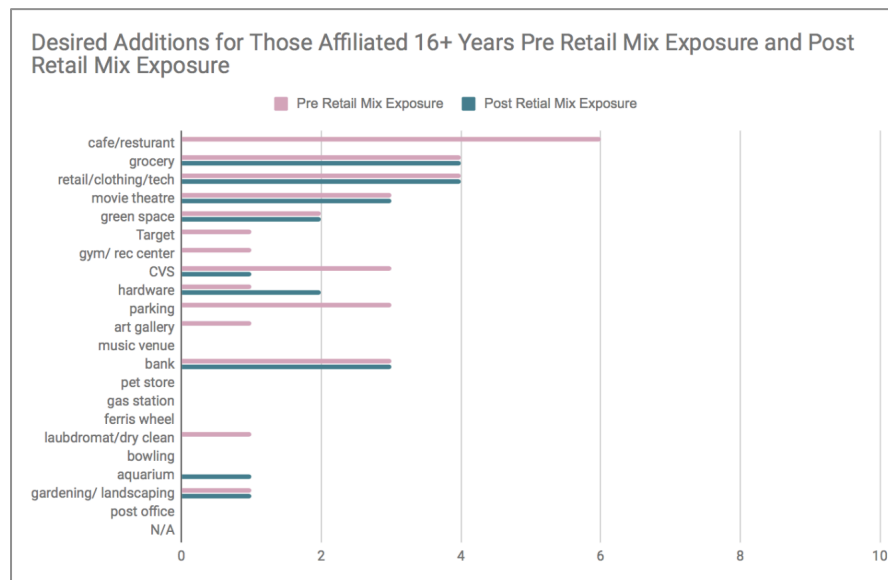


Figure 9.12 – Desired Additions By 6-10 Years

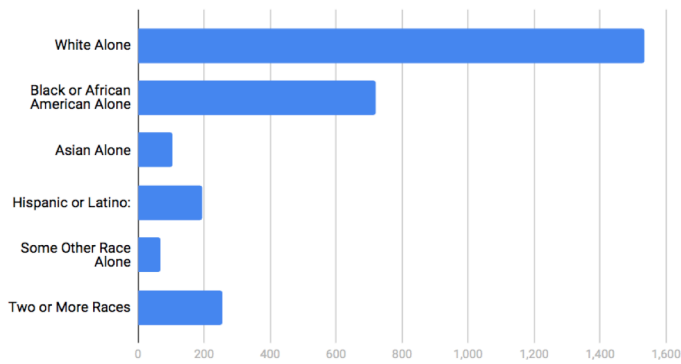


**Figure 9.13 – Desired Additions By 11-15 Years**



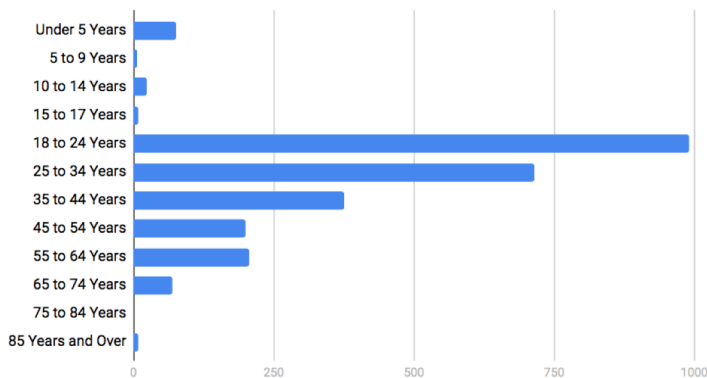
**Figure 9.14 – Desired Additions By 16+ Years**

Total Population: 2,677



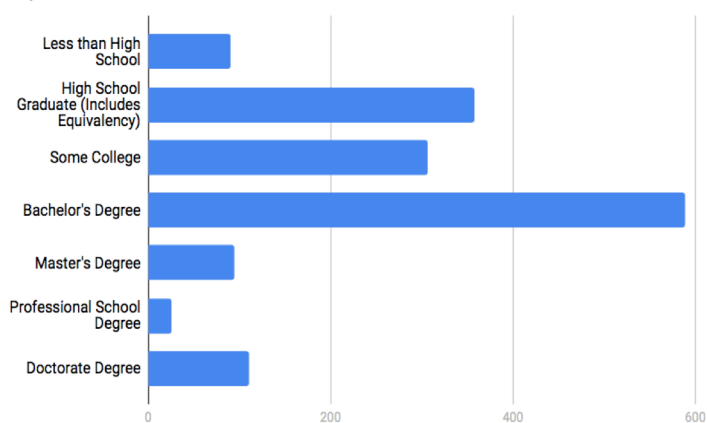
**Figure 9.15, Total Population by Race and Ethnicity, Discovery District, Columbus, Ohio, (Social Explorer 2016 Estimates)**

Total Population: 2,677



**Figure 9.16, Total Population by Age Brackets, Discovery District, Columbus, Ohio, (Social Explorer 2016 Estimates)**

Population 25 Years and Over: 1,572



**Figure 9.17, Total Population by Education Level, Discovery District, Columbus, Ohio, (Social Explorer 2016 Estimates)**

### Overall Statistics, (Social Explorer 2016 Estimates)

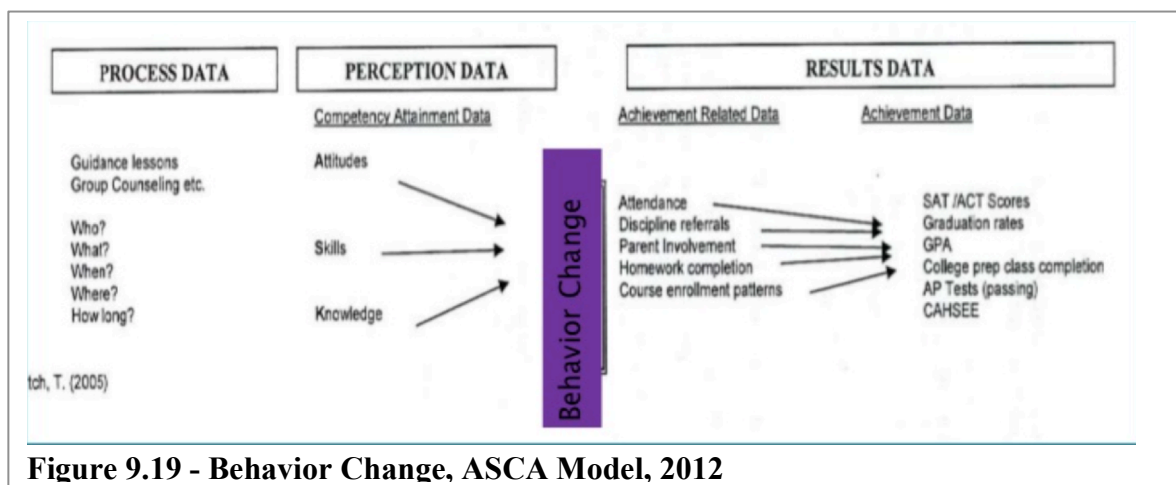
Land Area	0.71 acres
Total Population	2,677
Median Age	28.8
Median Household Income	\$26,652
Median Year Structure Built	1960
Median House Value for Owner Occupied	\$206,689
Median Gross Rent	\$654

### Housing Statistics

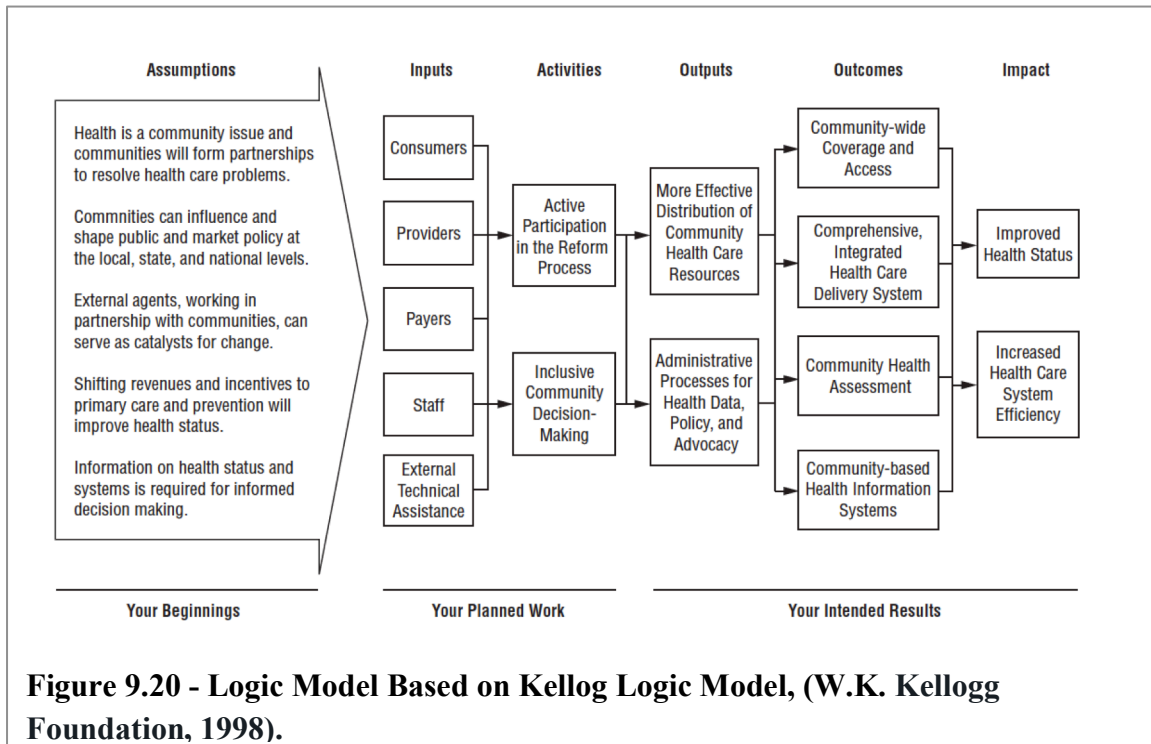
Households:	1,364	
Family Households:	262	19.2%
Married-Couple Family	180	13.2%
Other Family:	82	6.0%
Male Householder, No Wife Present	23	1.7%
Female Householder, No Husband Present	59	4.3%
Nonfamily Households:	1,102	80.8%
Male Householder	551	40.4%
Female Householder	551	40.4%

Housing Units:	1,522	
Occupied	1,364	89.6%
Vacant	158	10.4%

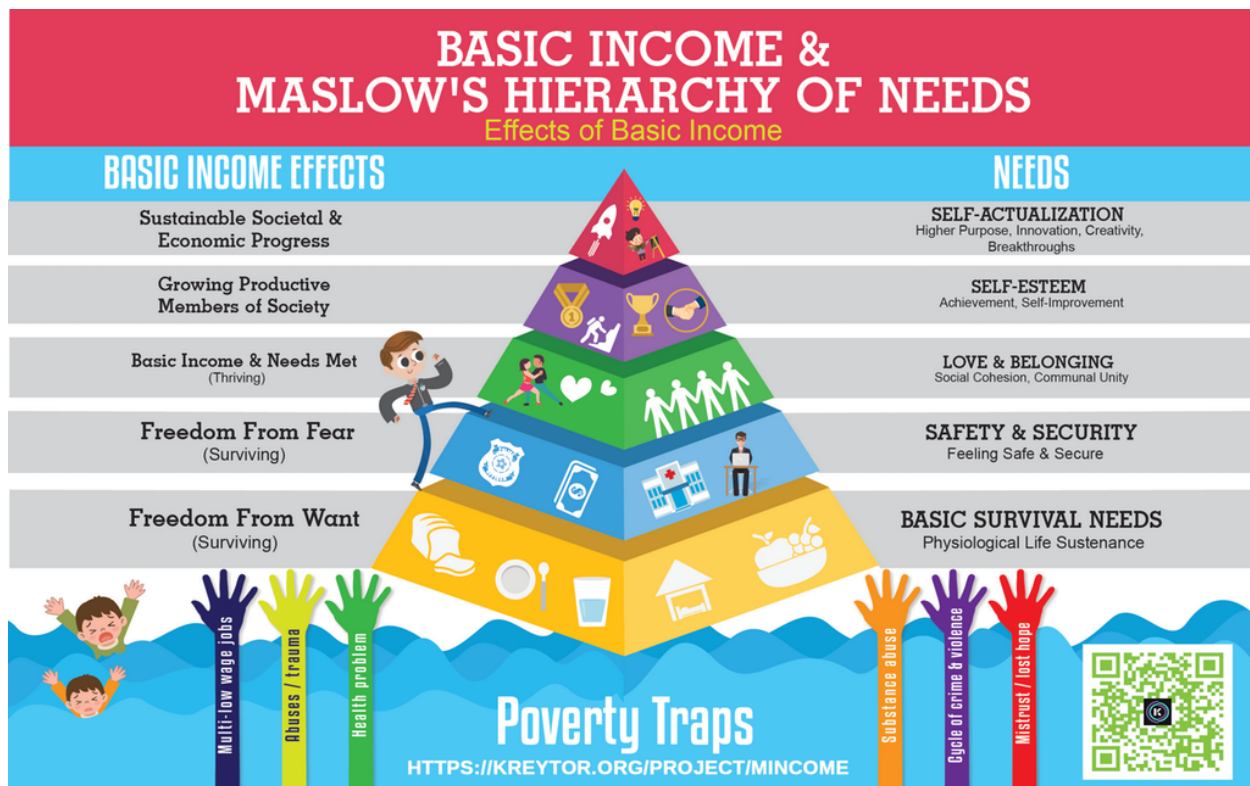
Occupied Housing Units:	1,364	
Owner Occupied	155	11.4%
Renter Occupied	1,209	88.6%



**Figure 9.19 - Behavior Change, ASCA Model, 2012**



**Figure 9.20 - Logic Model Based on Kellogg Logic Model, (W.K. Kellogg Foundation, 1998).**



**Figure 9.21 – Maslow's Hierachy of Needs Relative to Poverty**





Figure 9.22 – Maslow's Hierachy of Needs in the Workplace

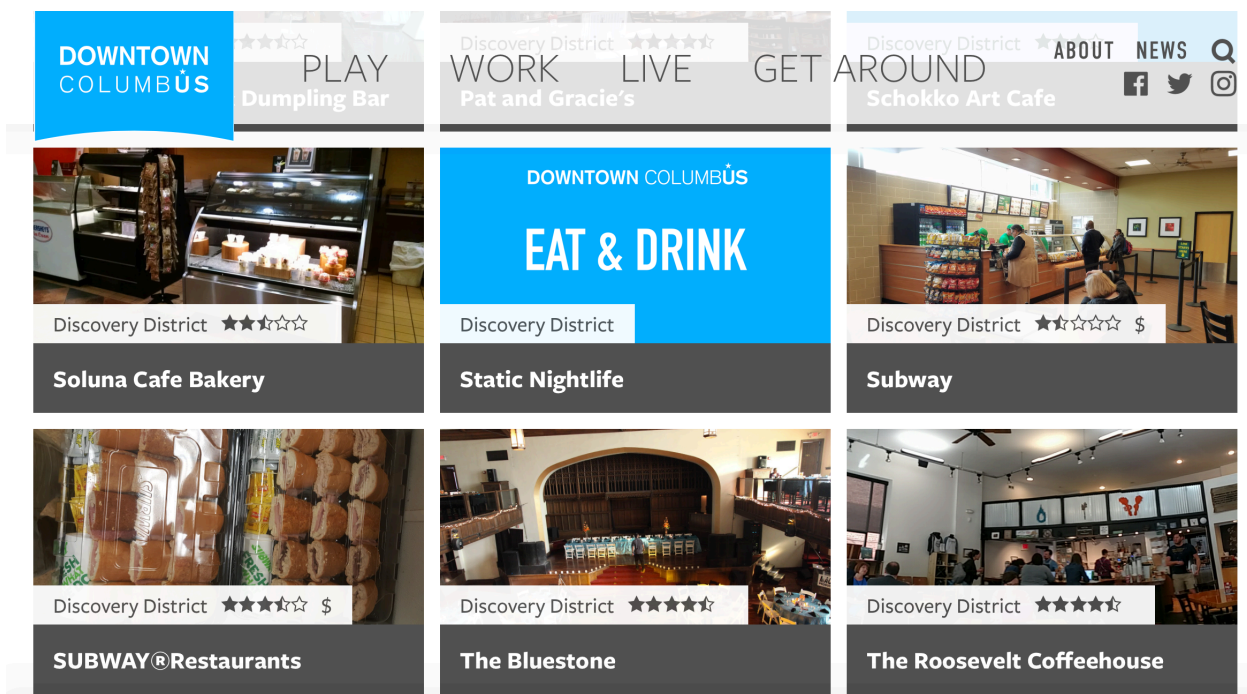
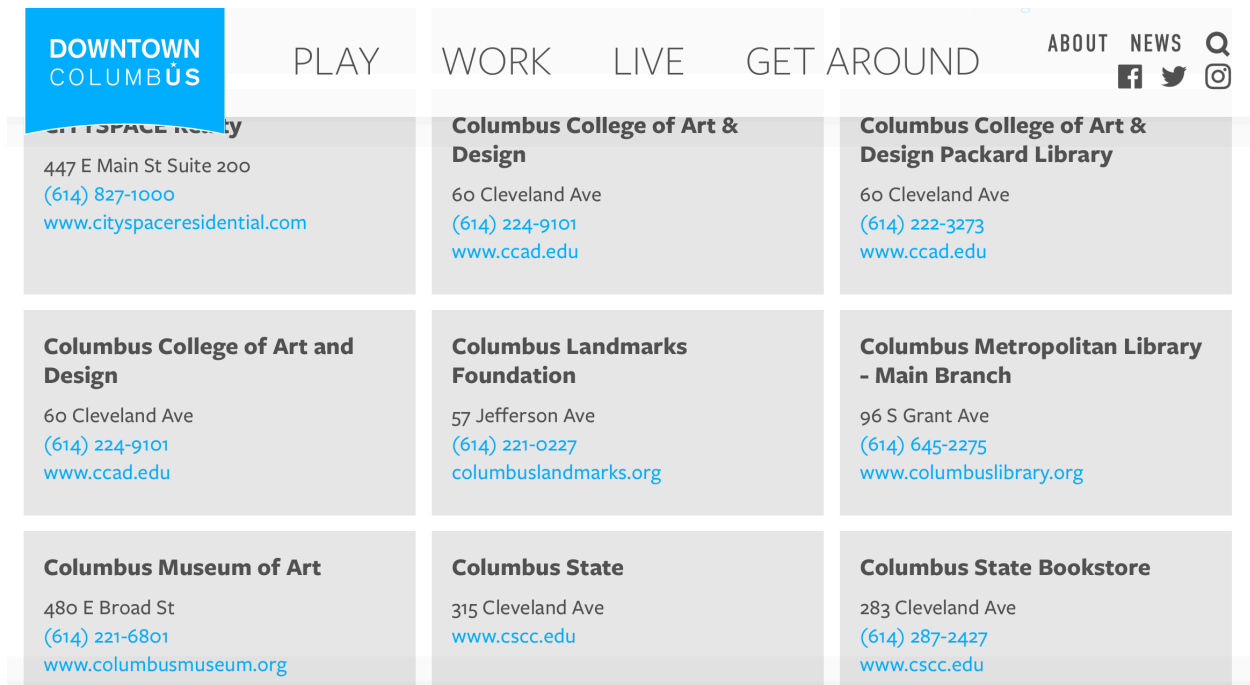


Figure 9.23 – DowntownColumbus.com



**Figure 9.24 – DowntownColumbus.com**



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